



CIGARETTE INFORMATION REPORT

PHILIP MORRIS USA RESEARCH AND DEVELOPMENT



2050081942

JULY, 1984
entered

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JULY 31, 1984

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ALPHABETICAL INDEX OF BRANDS

BRAND	SIZE	PAGE NO.*	COM-PANY**	BRAND	SIZE	PAGE NO.*	COM-PANY**
Alpine	K-FM	20	PM	Kent (Box)	L-F	42	LO
Barclay	K-F	9	BW	Kent	K-F	13	LO
Barclay Men.	K-FM	17	BW	Kent III	K-F	7	LO
Barclay (Box)	L-F	6	BW	Kent	100	27	LO
Barclay	100	23	BW	Kent Men.	100M	47	LO
Barclay Men.	100M	31	BW	Kent III	100	22	LO
Belair	K-FM	19	BW	Kent Golden Lights	K-F	10	LO
Belair	100M	32	BW	Kent Golden Lights Men.	K-FM	18	LO
Benson & Hedges (Box)	R-F	46	PM	Kent Golden Lights	100	24	LO
Benson & Hedges (Box)	K-F	46	PM	Kent Golden Lights Men.	100M	32	LO
Benson & Hedges	100	28	PM	Kool	R-NFM	47	BW
Benson & Hedges Men.	100M	36	PM	Kool (Box)	L-FM	47	BW
Benson & Hedges (Box)	100	46	PM	Kool	K-FM	21	BW
Benson & Hedges Men. (Box)	100M	47	PM	Kool Milds	K-FM	19	BW
Benson & Hedges Lights	100	25	PM	Kool Ultra	K-FM	17	BW
Benson & Hedges Lights Men.	100M	34	PM	Kool Lights	K-FM	18	BW
B & H DeLuxe U.L. (Box)	100	23	PM	Kool	100M	35	BW
B & H DeLuxe U.L. Men. (Box)	100M	30	PM	Kool Lights	100M	33	BW
B & H Multifilter	K-FC	40	PM	Kool Ultra	100M	31	BW
B & H Multifilter Men.	K-FM	20	PM	Lark	K-FC	40	LG
Bright	K-FM	18	R	Lark	100C	41	LG
Bright	100M	32	R	Lark Lights	K-FC	40	LG
Bull Durham	K-F	46	A	Lark Lights	100C	41	LG
Cambridge	100	22	PM	L & M (Box)	L-F	46	LG
Cambridge (Box)	K-F	6	PM	L & M	K-F	13	LG
Cambridge	K-F	7	PM	L & M	100	26	LG
Camel	R-NF	43	R	Long Johns	120	46	A
Camel	K-F	14	R	Long Johns Men.	120M	47	A
Camel Lights (Box)	L-F	42	R	Lucky Strike	R-NF	43	A
Camel Lights	K-F	10	R	Lucky Strike	K-F	13	A
Camel Lights	100	25	R	Lucky Strike (Box)	K-F	12	A
Carlton	K-F	7	A	Lucky Strike	100	46	A
Carlton Men.	K-FM	16	A	Marlboro (Box)	L-F	42	PM
Carlton (Box)	K-F	6	A	Marlboro	K-F	15	PM
Carlton	100	23	A	Marlboro 25's	K-F	XVI	PM
Carlton (Box)	100	22	A	Marlboro Lights	K-F	12	PM
Carlton Men.	100M	47	A	Marlboro Lights 25's	K-F	XVI	PM
Carlton	120	29	A	Marlboro Lights (Box)	K-F	12	PM
Carlton Men.	120M	37	A	Marlboro Lights	100	26	PM
Century	K-F	XVII	R	Marlboro Lights (Box)	100	26	PM
Century Lights	K-F	XVII	R	Marlboro Men.	K-FM	21	PM
Century	100	XVII	R	Marlboro	100	28	PM
Century Lights	100	XVII	R	Marlboro (Box)	100	46	PM
Chesterfield	R-NF	47	LG	Max	120	46	LO
Chesterfield King	K-NF	43	LG	Max Men.	120M	47	LO
Chesterfield	K-F	46	LG	Merit	K-F	10	PM
Chesterfield	100	46	LG	Merit Ultra Lights	K-F	8	PM
Doral II	K-F	8	R	Merit Men.	K-FM	18	PM
Doral II Men.	K-FM	16	R	Merit Ultra Lights Men.	K-FM	16	PM
English Ovals (Box)	R-NF	47	PM	Merit	100	24	PM
English Ovals (Box)	K-NF	47	PM	Merit Ultra Lights	100	22	PM
Eve Slim Lights (Box)	100	46	LG	Merit Men.	100M	33	PM
Eve Slim Lights Men. (Box)	100M	47	LG	Merit Ultra Lights Men.	100M	30	PM
Eve Lights (Box)	120	46	LG	Montclair	K-FM	47	A
Eve Lights Men. (Box)	120M	47	LG	More	120	29	R
Galaxy	K-FC	46	PM	More Men.	120M	37	R
Half & Half	K-F	46	A	More Lights (Box)	100	38	R
Hi-Lite (Box)	100	46	PM	More Lights Men. (Box)	100M	39	R
H. Tareyton	K-NF	47	A	Newport Non-Men. (Box)	L-F	46	LO
Iceberg 100's	100M	47	A	Newport (Box)	L-FM	47	LO

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ALPHABETICAL INDEX OF BRANDS (cont.)

BRAND	SIZE	PAGE NO.*	COM-PANY**	BRAND	SIZE	PAGE NO.*	COM-PANY**
Newport	K-FM	21	LO	Saratoga Men. (Box)	120M	37	PM
Newport Non-Menthol	K-F	46	LO	Satin	100	25	LO
Newport	100M	36	LO	Satin Men.	100M	34	LO
Newport Lights	K-FM	18	LO	Silva Thins	100	38	A
Newport Lights (Box)	L-FM	47	LO	Silva Thins Men.	100M	39	A
Newport Lights	100M	32	LO	Spring	100M	47	LO
Now (Box)	L-F	6	R	St. Moritz	100	46	LG
Now	K-F	7	R	St. Moritz Men.	100M	47	LG
Now Men.	K-FM	16	R	Sterling Special Blend (Box)	100	26	R
Now	100	22	R	Sterling Special Blend Men. (Box)	100M	35	R
Now Men.	100M	30	R	Tall	120	46	A
Old Gold	K-NF	47	LO	Tall Men.	120M	47	A
Old Gold	K-F	15	LO	Tareyton	K-FC	40	A
Old Gold Lights	K-F	46	LO	Tareyton	100C	41	A
Old Gold	100	46	LO	Tareyton Lights	K-FC	40	A
Pall Mall	K-F	46	A	Tareyton Long Lights	100C	41	A
Pall Mall Extra Light	K-F	46	A	Triumph	K-F	46	LO
Pall Mall Light	100	25	A	Triumph Men.	K-FM	47	LO
Pall Mall Light Men.	100M	47	A	Triumph	100	46	LO
Pall Mall	K-NF	43	A	Triumph Men.	100M	47	LO
Pall Mall	100	27	A	True	K-F	9	LO
Parliament Lights (Box)	L-F	42	PM	True	100	24	LO
Parliament Lights	K-F	11	PM	True Men.	K-FM	17	LO
Parliament Lights	100C	41	PM	True Men.	100M	33	LO
Philip Morris	R-NF	43	PM	Vantage	K-F	11	R
P.M. Commander	K-NF	43	PM	Vantage Men.	K-FM	19	R
P.M. Inter. (Box)	100	46	PM	Vantage	100	24	R
P.M. Inter. Men. (Box)	100M	47	PM	Vantage Men.	100M	34	R
Picayune	R-NF	47	LG	Vantage Ultra Lights	K-F	9	R
Players (Box)	R-NF	47	PM	Vantage Ultra Lights Men.	KFM	16	R
Players (Box)	K-F	13	PM	Vantage Ultra Lights	100	23	R
Players Men. (Box)	K-FM	20	PM	Vantage Ultra Lights Men.	100M	30	R
Players (Box)	100	27	PM	Viceroy	K-F	15	BW
Players (Box)	100M	35	PM	Viceroy Rich Lights	K-F	12	BW
Raleigh	K-NF	47	BW	Viceroy Rich Lights	100	26	BW
Raleigh	K-F	14	BW	Viceroy	100	27	BW
Raleigh Lights	K-F	11	BW	Virginia Slims	100	38	PM
Raleigh Lights	100	24	BW	Virginia Slims Men.	100M	39	PM
Raleigh	100	28	BW	Va. Slims Lights (Box)	100	38	PM
Richland	K-F	XVI	BW	Va. Slims Lights Men. (Box)	100M	39	PM
Richland Menthol	K-FM	XVI	BW	Winston (Box)	L-F	42	R
Salem	K-FM	20	R	Winston	K-F	15	R
Salem	100M	36	R	Winston Lights	K-F	11	R
Salem Lights	K-FM	19	R	Winston Ultra Lights	K-F	8	R
Salem Lights	100M	33	R	Winston Lights	100	25	R
Salem Ultra Lights	K-FM	17	R	Winston	100	28	R
Salem Ultra Lights	100M	31	R	Winston Ultra Lights	100	23	R
Salem Slim Lights (Box)	100M	39	R	Winston International	95	46	R
Saratoga (Box)	120	29	PM				

*Location of complete analytical data in report.

**Key: A = American; BW = Brown & Williamson; LG = Liggett Group; LO = Lorillard; PM = Philip Morris; R = Reynolds

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HIGHLIGHTSNEW BRANDSPHILIP MORRISMARLBORO 25'S

Philip Morris is test marketing Marlboro 85 cigarettes in a 25 cigarette per pack configuration in Spokane, Washington and Indianapolis, Indiana. The carton contains eight packs for a total of 200 cigarettes. This cigarette delivers 16 mg tar and 1 mg nicotine.

MARLBORO LIGHTS 25'S

Philip Morris is test marketing Marlboro Lights 85 cigarettes in a 25 cigarette per pack configuration in Indianapolis, Indiana. The carton contains eight packs for a total of 200 cigarettes. This cigarette delivers 11 mg tar and 0.8 mg nicotine.

VIRGINIA SLIMS LIGHTS OVALS 100 BOX (PLAIN & MENTHOL)

Philip Morris is test marketing Virginia Slims Lights Ovals 100 Box (plain and menthol) cigarettes in Rochester, New York; Birmingham, Alabama; and Las Vegas, Nevada. These cigarettes have an oval shape and deliver 9 mg tar and 0.7 mg nicotine.

LORILLARDNEWPORT 100 (BOX)NEWPORT LIGHTS 100 (BOX)

Lorillard is test marketing Newport 100 (Box) and Newport Lights 100 (Box) cigarettes in Connecticut. Newport 100 (Box) delivers 20 mg tar and 1.6 mg nicotine. Newport Lights 100 (Box) delivers 8 mg tar and 0.8 mg nicotine. These cigarettes are similar to Newport 100 and Newport Lights 100 already on the market in soft packs.

LIGGETT GROUPSTRIDE 85STRIDE 100 (PLAIN & MENTHOL)

The Liggett Group is distributing Stride cigarettes, a value entry product, in Syracuse and Rochester, New York, and Omaha, Nebraska. The color of the pack is silver and burgundy. These cigarettes, like other generic cigarettes, are similar to L & M 85 and 100 in most characteristics.

BASICS 85 (PLAIN & MENTHOL)BASICS 100

The Grand Union Co. is distributing Basics, an 85 and 100 mm generic cigarette in New Jersey. These cigarettes, like other generic cigarettes, are similar to L & M 85 and 100 in most characteristics.

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GENERIC PRODUCTS CORPORATION

- ✓ GPC FULL FLAVOR 85
- ✓ GPC FULL FLAVOR 100

Generic Products Corporation is distributing GPC Full Flavor 85 and 100 mm cigarettes. These cigarettes are manufactured by the Liggett Group. This product is higher in tar delivery than both L & M 85 and 100 and other generic products.

BRAND MODIFICATIONSR. J. REYNOLDS

- ✓ SALEM LIGHTS 100

The filter length of Salem Lights 100 cigarettes was increased (27 to 31 mm) resulting in a lower tobacco weight (0.847 to 0.803 g). The total RTD (5.0 to 5.4 in. H₂O), filter RTD (4.3 to 4.8 in. H₂O), and filter weight (0.17 to 0.19 g) increased correlating with the increased filter length. A lower smoke menthol delivery (0.53 to 0.45 mg) correlated with a lower menthol in filler content (3.6 to 2.9 mg).

- ✓ WINSTON 100

The tipping paper length was increased (31 to 32 mm) on Winston 100 cigarettes. No changes were noted in smoke deliveries.

SEMI-ANNUAL RECONSTITUTED TOBACCO, EXPANDED TOBACCO AND EXPANDED STEMS SURVEY

No changes were noted in the levels, material content, or type of construction in the reconstituted tobacco, expanded tobacco or expanded stems content in the competitive companies during the first half of 1984. Details of these data are given on pages 44 and 45.

METHODOLOGY CHANGES

A program has been initiated throughout Philip Morris U.S.A. and Philip Morris International to standardize terminology and reporting of data. In conjunction with this program, the data on the analyses mentioned below will be reported as follows:

1. Tobacco weight will be reported corrected to 12.5% O.V.
2. Total alkaloids and total reducing sugars will be reported corrected to a dry weight basis (DWB).

Page XIV shows this comparison. This is the last time this comparison will appear in the C.I. Report.

A graphical representation of the sales weighted averages of tar, nicotine and CO comparing Philip Morris versus the industry is shown in the graph section and will be updated quarterly.

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NEW BRANDSPHILIP MORRISMARLBORO 25'S

Philip Morris is test marketing Marlboro 85 cigarettes in a 25 cigarette per pack configuration in Spokane, Washington and Indianapolis, Indiana. The carton contains eight packs for a total of 200 cigarettes.



	<u>MARLBORO 85</u>	
	<u>25's</u>	<u>20's</u>
<u>Smoke</u>		
Butt Length, mm	28	28
FTC Tar, mg/cigt.	15.9	16.1
Nicotine, mg/cigt.	1.03	1.05
Puffs/cigt.	8.8	9.0
Filtration Eff., %	45	47
CO, mg/cigt.	15.8	15.2
<u>Cigarette</u>		
Total RTD, in./mm of H ₂ O	4.6/117	4.7/119
Length, mm	84.3	83.8
Circumference, mm	24.9	24.8
<u>Paper</u>		
Porosity, sec.	19	23
<u>Filter</u>		
RTD, in./mm of H ₂ O	2.6/66	2.8/71
Length, mm	21.1	21.0
Weight, g	0.12	0.13
Ventilation, %	11	11
<u>Filler</u>		
Total alkaloids, % (DWB)	1.88	1.87
Total red. sugars, % (DWB)	6.5	6.8
Wt. of tob., g (Corrected to 12.5% O.V.)	0.751	0.763
Rod density, g/cc	0.240	0.248

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PHILIP MORRISMARLBORO LIGHTS 25's

Philip Morris is test marketing Marlboro Lights 85 cigarettes in a 25 cigarette per pack configuration in Indianapolis, Indiana. The carton contains eight packs for a total of 200 cigarettes.

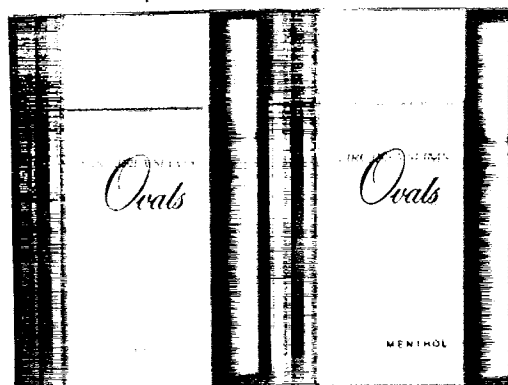
MARLBORO LIGHTS 85

	<u>25's</u>	<u>20's</u>
<u>Smoke</u>		
Butt Length, mm	34	34
FTC Tar, mg/cigt.	11.4	11.1
Nicotine, mg/cigt.	0.76	0.75
Puffs/cigt.	8.5	8.2
Filtration Eff., %	55	55
CO, mg/cigt.	12.2	12.2
<u>Cigarette</u>		
Total RTD, in./mm of H ₂ O	5.0/127	5.1/130
Length, mm	84.2	83.9
Circumference, mm	24.9	24.8
<u>Paper</u>		
Porosity, sec.	18	20
<u>Filter</u>		
RTD, in./mm of H ₂ O	3.9/99	3.9/99
Length, mm	27.3	27.0
Weight, g	0.17	0.17
Ventilation, %	23	21
<u>Filler</u>		
Total alkaloids, % (DWB)	1.90	1.87
Total red. sugars, % (DWB)	6.6	7.0
Wt. of tob., g (Corrected to 12.5% O.V.)	0.695	0.687
Rod density, g/cc	0.248	0.247

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PHILIP MORRISVIRGINIA SLIMS LIGHTS OVALS 100 BOX
(PLAIN & MENTHOL)

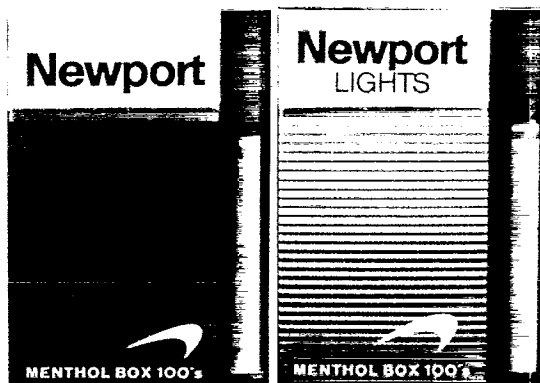
Philip Morris is test marketing Virginia Slims Lights Ovals 100 Box (plain and menthol) cigarettes in Rochester, New York; Birmingham, Alabama; and Las Vegas, Nevada. These oval cigarettes are similar to Virginia Slims Lights 100 in most characteristics except for shape.



	VIRGINIA SLIMS LIGHTS OVALS 100 (BOX)	VIRGINIA SLIMS LIGHTS 100 (BOX)	VIRGINIA SLIMS LIGHTS OVALS MENTHOL 100 (BOX)	VIRGINIA SLIMS LIGHTS MENTHOL 100 (BOX)
<u>Smoke</u>				
Butt Length, mm	39	39	39	39
FTC Tar, mg/cigt.	8.8	8.8	9.5	9.3
Nicotine, mg/cigt.	0.68	0.66	0.68	0.65
Puffs/cigt.	10.4	9.4	10.4	9.4
Filtration Eff., %	48	53	47	52
Filler Rod TPM, mg/cigt.	29.3	26.6	29.2	27.0
CO, mg/cigt.	7.7	9.2	8.0	8.8
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	5.2/132	4.8/122	5.0/127	5.0/127
Length, mm	98.7	98.4	99.1	98.4
Circumference, mm	23.0	23.0	23.0	23.0
<u>Paper</u>				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.8	0.8	0.7	0.8
Porosity, sec.	14	14	13	14
<u>Filter</u>				
RTD, in./mm of H ₂ O	4.6/117	4.4/112	4.2/107	4.3/109
Length, mm	31.6	31.5	31.6	31.6
Weight, g	0.18	0.16	0.17	0.16
Fiber denier/shape	4.5/Y	3.2/Y	4.6/Y	3.2/Y
Ventilation, %	47	42	45	39
<u>Filler</u>				
Total alkaloids, % (DWB)	1.92	1.87	1.93	1.83
Total red. sugars, % (DWB)	5.0	6.2	5.8	6.1
Wt. of tobacco, g (Corrected to 12.5% O.V.)	0.702	0.690	0.683	0.697
Rod Density, g/cc	0.282	0.247	0.272	0.250
Reconstituted Tob., %	20	20	20	20
E.S., %	2	2	2	2
Floated Material, % (E.T.)	12	12	12	12
<u>Menthol, mg/cigt.</u>				
Smoke	-	-	0.65	0.63
Filler	-	-	3.0	3.2
Filter	-	-	1.0	1.8

LORILLARDNEWPORT 100 (BOX)NEWPORT LIGHTS 100 (BOX)

Lorillard is test marketing Newport 100 (Box) and Newport Lights 100 (Box) cigarettes in Connecticut. These cigarettes are similar to the Newport 100 and Newport Lights 100 already on the market in soft packs.

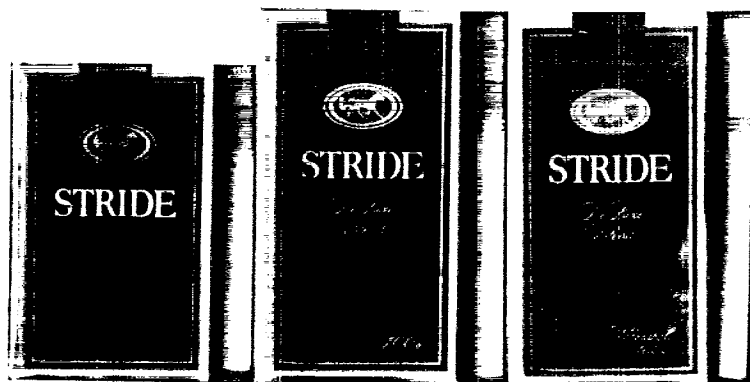


	<u>NEWPORT 100</u>		<u>NEWPORT LIGHTS 100</u>	
	<u>(Box)</u>	<u>(Soft Pack)</u>	<u>(Box)</u>	<u>(Soft Pack)</u>
<u>Smoke</u>				
Butt Length, mm	35	35	38	38
FTC Tar, mg/cigt.	20.1	19.1	8.3	8.4
Nicotine, mg/cigt.	1.56	1.54	0.80	0.78
Puffs/cigt.	9.2	9.3	8.8	8.8
Filtration Eff., %	42	43	51	53
Filler Rod TPM, mg/cigt.	32.2	31.6	29.7	28.9
CO Delivery, mg/cigt.	18.4	20.0	5.6	7.6
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	4.1/104	4.2/107	3.0/76	3.8/96
Length, mm	98.8	99.0	98.8	98.8
Circumference, mm	25.0	25.0	24.9	24.9
<u>Paper</u>				
<u>Components</u>				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.6	0.7	2.6	1.7
Porosity, sec.	36	36	25	22
<u>Filter</u>				
RTD, in./mm of H ₂ O	2.0/51	2.1/53	3.0/76	3.4/86
Length, mm	26.8	26.9	26.6	26.9
Weight, g	0.16	0.15	0.15	0.16
Fiber denier/shape	4.8/Y	4.6/Y	2.7/Y	2.8/Y
Tipping paper length, mm	32	32	35	35
Ventilation, %	None	None	52	45
Type	-	-	Porous	Porous
<u>Filler</u>				
Total alkaloids, % (DWB)	2.21	2.25	2.30	2.29
Total red. sugars, % (DWB)	8.5	8.4	8.9	8.2
Wt. of tob., g (Corrected to 12.5% O.V.)	0.808	0.803	0.791	0.792
Rod Density, g/cc	0.226	0.226	0.222	0.222
Reconstituted Tob., %	21	21	21	21
E.S., %	None	None	None	None
Floated Material, % (E.T.)	12	12	12	12
<u>Menthol, mg/cigt.</u>				
Smoke	0.57	0.53	0.34	0.37
Filler	1.7	1.8	2.0	2.4
Filter	0.8	0.7	0.7	1.0

2050081952

LIGGETT GROUPSTRIDE 85STRIDE 100 (PLAIN & MENTHOL)

The Liggett Group is distributing Stride cigarettes, a value-entry product in Syracuse and Rochester, New York; and Omaha, Nebraska. The pack is silver and burgundy. These cigarettes, like other generic cigarettes, are similar to L & M 85 and 100 in most characteristics.



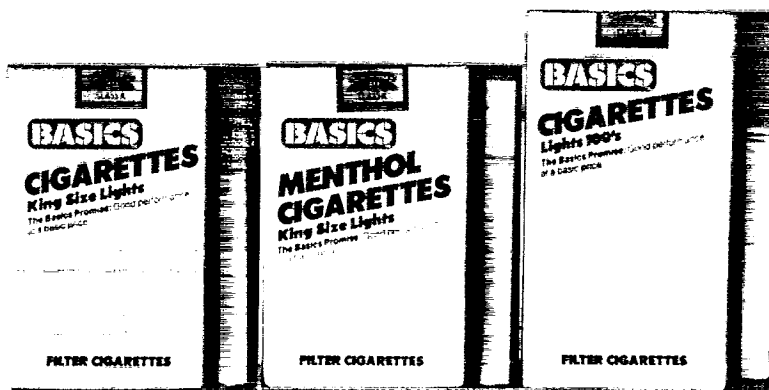
	<u>STRIDE 85</u>	<u>STRIDE 100</u>	<u>STRIDE MENTHOL 100</u>
<u>Smoke</u>			
Butt Length, mm	33	38	38
FTC Tar, mg/cigt.	12.6	13.2	13.3
Nicotine, mg/cigt.	0.93	1.04	1.02
Puffs/cigt.	7.3	8.9	9.0
Filtration Eff., %	45	48	47
Filler Rod TPM, mg/cigt.	27.0	27.6	26.5
CO, mg/cigt.	12.4	12.8	13.2
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	4.5/114	4.8/122	5.2/132
Length, mm	84.8	98.4	98.6
Circumference, mm	24.8	24.7	24.8
<u>Paper</u>			
Components			
Type	Cit.	Cit.	Cit.
Percent	0.3	0.4	0.4
Porosity, sec.	6*	6*	6*
<u>Filter</u>			
RTD, in./mm of H ₂ O	2.6/66	2.9/74	2.8/71
Length, mm	24.9	30.1	29.8
Weight, g	0.15	0.18	0.17
Fiber denier/shape	3.9/Y	3.9/Y	3.9/Y
Tipping paper length, mm	30	35	35
<u>Filler</u>			
Total alkaloids, % (DWB)	1.86	1.86	1.86
Total red. sugars, % (DWB)	10.8	10.5	11.3
Wt. of tobacco, g (Corrected to 12.5% O.V.)	0.648	0.746	0.769
Rod Density, g/cc	0.221	0.225	0.228
Reconstituted Tob., %	15	15	15
E.S., %	7	7	7
Floated Material, % (E.T.)	18	18	18
<u>Menthol, mg/cigt.</u>			
Smoke	-	-	0.47
Filler	-	-	2.2
Filter	-	-	0.8

*Perforated cigarette paper

2050081953

LIGGETT GROUPBASICS 85 (PLAIN & MENTHOL)BASICS 100

The Grand Union Co. is distributing Basics, an 85 and 100 mm generic cigarette in New Jersey. These cigarettes, like other generic cigarettes, are similar to L & M 85 and 100 in most characteristics.



	<u>BASICS 85</u>	<u>BASICS MENTHOL 85</u>	<u>BASICS 100</u>
<u>Smoke</u>			
Butt Length, mm	29	29	38
FTC Tar, mg/cigt.	11.9	12.2	12.0
Nicotine, mg/cigt.	0.85	0.91	0.94
Puffs/cigt.	7.4	7.2	8.2
Filtration Eff., %	44	45	49
Filler Rod TPM, mg/cigt.	25.9	28.1	27.6
CO, mg/cigt.	12.8	14.4	13.6
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	4.7/119	4.6/117	4.9/124
Length, mm	84.5	84.2	98.5
Circumference, mm	24.6	24.7	24.8
<u>Paper</u>			
<u>Components</u>			
Type	Cit.	Cit.	Cit.
Percent	2.8	2.6	1.6
Porosity, sec.	6*	6*	6*
<u>Filter</u>			
RTD, in./mm of H ₂ O	2.7/68	2.8/71	3.0/76
Length, mm	21.0	20.8	29.8
Weight, g	0.12	0.12	0.18
Fiber denier/shape	2.6/Y	2.6/Y	4.3/Y
Tipping paper length, mm	26	26	35
<u>Filler</u>			
Total alkaloids, % (DWB)	1.85	1.93	1.75
Total red. sugars, % (DWB)	10.4	9.3	10.8
Wt. of tobacco, g (Corrected to 12.5% O.V.)	0.693	0.687	0.710
Rod Density, g/cc	0.226	0.223	0.211
Reconstituted Tob., %	15	15	9
E.S., %	7	7	7
Floated Material, % (E.T.)	18	18	26
<u>Menthol, mg/cigt.</u>			
Smoke	-	0.47	-
Filler	-	1.5	-
Filter	-	0.9	-

*Perforated cigarette paper

2050081954

GENERIC PRODUCTS CORPORATIONGPC FULL FLAVOR 85GPC FULL FLAVOR 100

Generic Products Corporation is distributing GPC Full Flavor 85 and 100 mm cigarettes. These cigarettes are manufactured by the Liggett Group. This product is higher in tar delivery than both L & M 85 and 100 and other generic products.



	<u>GPC FULL FLAVOR 85</u>	<u>GPC FULL FLAVOR 100</u>
<u>Smoke</u>		
Butt Length, mm	33	38
FTC Tar, mg/cigt.	15.8	16.1
Nicotine, mg/cigt.	0.96	0.97
Puffs/cigt.	7.6	8.0
Filtration Eff., %	46	46
Filler Rod TPM, mg/cigt.	31.7	29.4
CO, mg/cigt.	19.3	17.9
<u>Cigarette</u>		
Total RTD, in./mm of H ₂ O	5.0/126	4.9/125
Length, mm	84.9	97.8
Circumference, mm	24.9	24.9
<u>Paper</u>		
Components		
Type	Cit.	Cit.
Percent	0.6	0.6
Porosity, sec.	23	25
<u>Filter</u>		
RTD, in./mm of H ₂ O	2.6/66	2.4/62
Length, mm	25.0	29.7
Weight, g	0.15	0.18
Tipping paper length, mm	30	35
<u>Filler</u>		
Total alkaloids, % (DWB)	1.87	1.82
Total red. sugars, % (DWB)	9.4	8.9
Wt. of tob., g (Corrected to 12.5% O.V.)	0.653	0.698
Rod density, g/cc	0.222	0.208

205081955

BRAND MODIFICATIONSR. J. REYNOLDS
SALEM LIGHTS 100

The filter length of Salem Lights 100 cigarettes was increased resulting in a lower tobacco weight. The total RTD, filter RTD, and filter weight increased correlating with the increased filter length. A lower smoke menthol delivery correlated with a lower menthol in filler content.

	<u>SALEM LIGHTS 100</u>	
	<u>Previous</u>	<u>Present</u>
<u>Smoke</u>		
Butt Length, mm	38	38
FTC Tar, mg/cigt.	10.1	9.6
Nicotine, mg/cigt.	0.83	0.79
Puffs/cigt.	9.9	9.7
Filtration Eff., %	57	62
CO Delivery, mg/cigt.	11.7	12.2
<u>Cigarette</u>		
Total RTD, in./mm of H ₂ O	5.0/127	5.4/137
<u>Filter</u>		
RTD, in./mm of H ₂ O	4.3/109	4.8/122
Length, mm	27.4	31.1
Weight, g	0.17	0.19
Fiber denier/shape	2.5/Y	2.4/Y
Tipping paper length, mm	35	35
Ventilation, %	31	30
Type/Rows of Holes	MP/1	MP/1
<u>Filler</u>		
Wt. of tob., g (Corrected to 12.5% O.V.)	0.847	0.803
Rod Density, g/cc	0.240	0.241
<u>Menthol, mg/cigt.</u>		
Smoke	0.53	0.45
Filler	3.6	2.9
Filter	1.0	1.2

2050081956

R. J. REYNOLDS
WINSTON 100

The tipping paper length was increased on Winston 100 cigarettes. No changes were noted in smoke deliveries.

<u>WINSTON 100</u>		
	<u>Previous</u>	<u>Present</u>
<u>Smoke</u>		
Butt Length, mm	34	35
FTC Tar, mg/cigt.	16.2	16.0
Nicotine, mg/cigt.	1.25	1.24
Puffs/cigt.	10.3	10.2
CO Delivery, mg/cigt.	16.6	17.0
<u>Cigarette</u>		
Total RTD, in./mm of H ₂ O	4.6/117	4.6/117
<u>Filter</u>		
Tipping paper length, mm	31	32
Ventilation, %	19	19
Type	ESP	ESP

2050081957

CHANGE IN REPORTING DATA

A program has been initiated throughout Philip Morris U.S.A. and Philip Morris International to standardize terminology and reporting of data. In conjunction with this program, the data on the analyses mentioned below will be reported as follows: 1) Tobacco weight will be reported corrected to 12.5% O.V. 2) Total alkaloids and total reducing sugars will be reported corrected to a dry weight basis (DWB).

<u>Manufacturer</u>	<u>Tobacco Weight, g</u>		<u>Total Alkaloids, %</u>		<u>Total Reducing Sugars, %</u>	
	<u>Equil.*</u>	<u>Corrected 12.5%</u>	<u>Equil.*</u>	<u>Dry Weight Basis</u>	<u>Equil.*</u>	<u>Dry Weight Basis</u>
<u>PHILIP MORRIS</u>						
Marlboro 80 (Box)	0.735	0.729	1.63	1.88	6.2	7.1
Marlboro 85	0.768	0.763	1.62	1.87	5.9	6.8
Marlboro Lights 85	0.694	0.687	1.62	1.87	6.1	7.0
Merit 85	0.690	0.684	1.68	1.94	6.0	6.9
Merit Ultra Lights 85	0.638	0.639	1.72	1.96	5.2	5.9
Va. Slims Lights 100 (Box)	0.697	0.690	1.62	1.87	5.4	6.2
B & H Lights 100	0.810	0.802	1.64	1.89	6.3	7.3
Marlboro 100	0.872	0.862	1.66	1.92	6.1	7.0
B & H DeLuxe Ultra Lights Men. 100 (Box)	0.721	0.715	1.60	1.84	5.5	6.3
<u>REYNOLDS</u>						
Winston 80 (Box)	0.735	0.733	1.68	1.92	6.8	7.8
Winston 85	0.772	0.768	1.65	1.89	7.1	8.2
Winston Lights 85	0.688	0.689	1.66	1.90	7.0	8.0
Camel Lights 85	0.687	0.687	1.66	1.90	6.5	7.4
Vantage 85	0.691	0.692	1.77	2.02	7.4	8.4
Salem 85	0.742	0.743	1.80	2.05	6.5	7.4
Salem Ultra Lights 85	0.595	0.597	1.80	2.06	5.9	6.7
Winston 100	0.879	0.878	1.76	2.01	7.6	8.7
Salem Slim Lights 100 (Box)	0.644	0.643	1.82	2.08	6.9	7.9
<u>BROWN & WILLIAMSON</u>						
Barclay 85	0.546	0.550	2.42	2.75	6.6	7.5
Viceroy 85	0.713	0.714	1.66	1.89	7.2	8.2
Kool 85	0.704	0.706	1.85	2.10	6.7	7.6
Belair 85	0.666	0.668	1.78	2.03	7.6	8.6
Kool Ultra 100	0.771	0.774	2.04	2.33	6.2	7.1
<u>AMERICAN</u>						
Tareyton 85	0.754	0.753	1.82	2.08	8.1	9.2
Pall Mall 100	0.848	0.843	1.86	2.14	8.6	9.6
<u>LORILLARD</u>						
Kent 85	0.723	0.720	1.68	1.93	7.3	8.4
Kent 100	0.804	0.799	1.78	2.04	7.4	8.5
True 100	0.788	0.789	1.92	2.19	5.3	6.0
Newport Menthol 85	0.727	0.725	2.00	2.30	7.6	8.7
Newport Menthol 100	0.808	0.803	1.95	2.25	7.3	8.4
<u>LIGGETT</u>						
L & M 85	0.654	0.656	1.62	1.84	9.2	10.5
L & M 100	0.694	0.696	1.62	1.84	9.0	10.2

*Equilibrated at 75°F and 60% R.H.

SMOKING MODIFICATIONS FOR BARCLAY-TYPE FILTER CIGARETTES

The FTC has determined that its present testing methodology does not accurately measure Brown & Williamson's Barclay cigarette smoke deliveries. The FTC has also found there is a significant likelihood the same problem exists with respect to Kool Ultra 85 and 100. These brands were tested using both the standard holder and the modified holder. All smoke data are higher for these cigarettes when using the modified holder because this holder reduces the amount of ventilation through the cigarette. No other brands show the change in smoke deliveries when using the modified holder.

	<u>Barclay 80 (Box)</u>		<u>Barclay 85</u>		<u>Barclay Menthol 85</u>	
	<u>Standard</u>	<u>Modified</u>	<u>Standard</u>	<u>Modified</u>	<u>Standard</u>	<u>Modified</u>
Butt Length, mm	35	35	35	35	35	35
FTC Tar, mg/cigt.	1.0	7.4	0.8	7.1	1.0	6.2
Nicotine, mg/cigt.	0.12	0.69	0.10	0.72	0.11	0.50
Puffs/cigt.	7.9	6.4	8.4	7.1	8.4	7.3
CO, mg/cigt.	0.6	4.9	0.4	4.7	0.6	5.4

	<u>Barclay 100</u>		<u>Barclay Menthol 100</u>	
	<u>Standard</u>	<u>Modified</u>	<u>Standard</u>	<u>Modified</u>
Butt Length, mm	39	39	39	39
FTC Tar, mg/cigt.	2.6	8.8	2.5	9.4
Nicotine, mg/cigt.	0.24	0.73	0.23	0.74
Puffs/cigt.	9.3	8.4	9.2	8.8
CO, mg/cigt.	1.6	5.6	1.7	4.6

	<u>Kool Ultra 85</u>		<u>Kool Ultra 100</u>	
	<u>Standard</u>	<u>Modified</u>	<u>Standard</u>	<u>Modified</u>
Butt Length, mm	35	35	39	39
FTC Tar, mg/cigt.	2.0	8.2	4.5	9.8
Nicotine, mg/cigt.	0.20	0.66	0.40	0.80
Puffs/cigt.	7.8	6.7	9.1	8.4
CO, mg/cigt.	1.2	6.8	3.2	6.4

2050081959

BRAND INTRODUCTIONS

25 cigarettes per pack

These brands are in limited distribution and contain 25 cigarettes per pack. The data of these brands are not included in the tables of this report.

	PHILIP MORRIS		BROWN & WILLIAMSON	
	Marlboro 85	Marlboro Lights 85	Richland 85	Richland Menthol 85
<u>Smoke</u>				
Butt Length, mm	28	34	29	29
FTC Tar, mg/cigt.	15.9	11.4	15.3	15.7
Nicotine, mg/cigt.	1.03	0.76	1.14	1.08
Puffs/cigt.	8.8	8.5	8.4	7.4
Filtration Eff., %	45	55	40	41
Filler Rod TPM, mg/cigt.	32.4	33.2	28.6	28.6
CO, mg/cigt.	15.8	12.2	13.2	13.0
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	4.6/117	5.0/127	4.1/104	4.4/112
Length, mm	84.3	84.2	83.9	83.9
Circumference, mm	24.9	24.9	25.0	24.9
<u>Paper</u>				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.6	0.6	0.2	0.2
Porosity, sec.	19	18	16	17
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, in./mm of H ₂ O	2.6/66	3.9/99	2.0/51	2.1/53
Length, mm	21.1	27.3	21.0	21.1
Weight, g	0.12	0.17	0.12	0.13
Fiber denier/shape	3.2/Y	3.0/Y	3.6/Y	3.5/Y
Tipping paper length, mm	25	31	26	26
Ventilation, %	11	23	7	None
Type/Rows	ESP	Laser/2	ESP	-
<u>Filler</u>				
Total alkaloids, % (DWB)	1.88	1.90	2.00	2.13
Total red. sugars, % (DWB)	6.5	6.6	8.2	7.1
Reconstituted Tob., %	20	20	6	12
Expanded Stems, %	2	2	9	9
Floated Material, %	12	12	14	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.751	0.695	0.721	0.700
Rod Density, g/cc	0.240	0.248	0.230	0.226
<u>Menthol, mg/cigt.</u>				
Smoke	-	-	-	0.58
Filler	-	-	-	2.2
Filter	-	-	-	0.7

2050081960

BRAND INTRODUCTIONS
25 cigarettes per pack

R. J. REYNOLDS

<u>Century 85</u>	<u>Century Lights 85</u>	<u>Century 100</u>	<u>Century Lights 100</u>	
30	34	38	38	<u>Smoke</u>
14.3	9.4	16.5	11.5	Butt Length, mm
1.09	0.79	1.23	0.94	FTC Tar, mg/cigt.
8.4	8.2	9.9	9.6	Nicotine, mg/cigt.
49	58	53	51	Puffs/cigt.
34.4	32.5	38.5	31.0	Filtration Eff., %
14.1	11.5	17.6	12.3	Filler Rod TPM, mg/cigt.
				CO, mg/cigt
				<u>Cigarette</u>
5.8/147	5.8/147	5.6/142	5.1/130	Total RTD, in./mm of H ₂ O
84.0	83.8	99.0	98.7	Length, mm
24.0	24.1	24.1	24.0	Circumference, mm
				<u>Paper</u>
				Components
Phos.	Cit.	Phos.	Cit.	Type
0.2	0.4	0.9	0.4	Percent
25	26	24	26	Porosity, sec.
				<u>Filter</u>
CA	CA	CA	CA	Type
3.7/94	4.8/122	3.7/94	3.9/99	RTD, in./mm of H ₂ O
23.1	27.0	31.1	31.0	Length, mm
0.14	0.16	0.18	0.19	Weight, g
2.6/Y	2.5/Y	3.8/Y	3.7/Y	Fiber denier/shape
27	31	35	35	Tipping paper length, mm
16	29	14	30	Ventilation, %
ESP	ESP	ESP	ESP	Type/Rows
				<u>Filler</u>
1.95	1.96	1.72	2.02	Total alkaloids, % (DWB)
7.3	6.8	7.3	8.0	Total red. sugars, % (DWB)
24	24	24	24	Reconstituted Tob., %
None	None	None	None	Expanded Stems, %
28	15	16	22	Floated Material, %
				Wt. of tob., g (Corrected to 12.5% O.V.)
0.645	0.653	0.773	0.745	Rod Density, g/cc
0.231	0.248	0.246	0.237	

2050081961

PHILIP MORRIS DATA

	SALES	FTC TAR, MG/CIGT.	NICOTINE, MG/CIGT.		SALES	FTC TAR, MG/CIGT.	NICOTINE, MG/CIGT.
<u>120 MM FILTER PLAIN</u>				<u>85 MM FILTER CHARCOAL</u>			
More	0.78	17.3	1.32	Tareyton	0.70	12.7	0.88
SARATOGA (BOX)	0.32	13.7	0.94	Lark Lights	0.15	11.9	0.86
Carlton	0.27	7.2	0.65	Tareyton Lights	0.10	5.0	0.42
				Lark	0.10	13.1	0.98
<u>120 MM FILTER MENTHOL</u>				B & H MULTIFILTER	0.09	12.1	0.79
More	0.64	16.3	1.33	B & H MULTIFILTER MEN.	0.01	11.8	0.81
SARATOGA (BOX)	0.14	13.3	0.94				
Carlton	-	6.6	0.60	<u>85 MM FILTER PLAIN</u>			
<u>100 MM FILTER PLAIN</u>				MARLBORO	7.84	16.1	1.05
MARLBORO	2.72	16.2	1.10	Winston	6.92	16.6	1.16
Winston	2.43	16.0	1.24	MARLBORO LIGHTS	4.14	11.1	0.75
MARLBORO LIGHTS	2.27	11.2	0.80	Winston Lights	2.57	10.3	0.80
Winston Lights	1.82	11.1	0.88	MERIT	2.25	7.7	0.58
BENSON & HEDGES	1.71	16.4	1.09	Vantage	2.05	9.1	0.74
MERIT	1.56	9.7	0.72	MARLBORO LIGHTS (BOX)	1.75	10.6	0.74
B & H LIGHTS	1.08	9.8	0.71	Camel	1.29	14.8	1.06
Pall Mall	1.00	15.1	1.15	Camel Lights	1.16	8.6	0.66
Vantage	0.94	9.1	0.74	Kent	1.08	12.0	0.97
B & H DELUXE ULTRA LIGHTS (BOX)	0.92	5.5	0.41	Viceroy	0.95	15.7	1.01
Carlton	0.80	5.0	0.42	Raleigh	0.75	13.9	0.94
Kent	0.67	13.7	1.14	MERIT ULTRA LIGHTS	0.62	4.1	0.34
Kent III	0.65	4.6	0.48	Kent Golden Lights	0.62	8.1	0.74
Kent Golden Lights	0.57	8.6	0.82	Carlton	0.62	1.6	0.15
Vantage Ultra Lights	0.52	5.2	0.45	Kent III	0.60	3.2	0.36
Raleigh	0.51	15.0	1.04	True	0.60	5.5	0.53
True	0.46	9.4	0.87	L & M	0.55	12.4	0.90
MERIT ULTRA LIGHTS	0.44	4.2	0.37	Barclay	0.48	*	*
MARLBORO LIGHTS (BOX)	0.41	11.3	0.81	Lucky Strike 85	0.42	11.1	0.77
Winston Ultra Lights	0.39	4.8	0.41	PARLIAMENT LIGHTS	0.37	9.4	0.70
Now	0.38	3.5	0.35	Vantage Ultra Lights	0.37	5.7	0.46
Camel Lights	0.36	10.8	0.81	Old Gold	0.23	16.7	1.36
Barclay	0.34	*	*	Winston Ultra Lights	0.22	5.3	0.45
Viceroy	0.31	14.8	1.03	PLAYERS (BOX)	0.20	11.6	0.81
Satin	0.27	10.2	0.93	Now	0.19	1.4	0.16
Carlton (Box)	0.25	0.8	0.10	Raleigh Lights	0.18	10.2	0.79
Raleigh Lights	0.19	9.7	0.79	Doral II	0.11	4.5	0.42
L & M	0.15	12.9	0.94	Viceroy Rich Lights	0.11	10.3	0.80
PLAYERS (BOX)	0.12	13.2	0.88	CAMBRIDGE	0.04	1.1	0.12
Viceroy Rich Lights	0.12	11.5	0.86	CAMBRIDGE (BOX)	-	0.0	0.00
CAMBRIDGE	0.10	4.4	0.38	Carlton (Box)	-	0.0	0.00
Pall Mall Light	0.09	10.0	0.80	Lucky Strike 85 (Box)	-	10.9	0.87
Sterling Special Blend (Box)	-	11.5	0.92	<u>85 MM FILTER MENTHOL</u>			
<u>100 MM FILTER MENTHOL</u>				Kool	5.30	15.6	1.02
Salem Lights	2.00	9.6	0.79	Salem	2.84	15.0	1.08
Kool	1.80	13.4	0.90	Salem Lights	2.49	9.7	0.76
Salem	1.77	16.1	1.26	Newport	1.77	17.0	1.34
BENSON & HEDGES	1.57	16.1	1.09	Kool Milds	1.20	10.4	0.74
B & H LIGHTS	0.93	9.9	0.71	Belair	0.59	10.0	0.77
B & H DELUXE ULTRA LIGHTS (BOX)	0.60	5.5	0.41	Vantage	0.37	9.3	0.73
Newport	0.53	19.1	1.54	MERIT	0.34	7.8	0.57
Belair	0.51	7.5	0.58	MARLBORO	0.32	15.5	1.02
Salem Ultra Lights	0.48	5.7	0.48	True	0.29	5.3	0.50
MERIT	0.30	9.7	0.69	Newport Lights	0.28	8.2	0.76
Bright	0.25	6.8	0.60	Kool Lights	0.25	8.4	0.68
Kool Lights	0.25	9.7	0.77	Carlton	0.25	1.1	0.12
True	0.24	9.5	0.91	Salem Ultra Lights	0.24	5.5	0.44
Now	0.23	3.2	0.28	MERIT ULTRA LIGHTS	0.16	3.8	0.30
Kool Ultra	0.17	*	*	PLAYERS (BOX)	0.15	11.9	0.82
Satin	0.17	9.8	0.88	Kool Ultra	0.15	*	*
MERIT ULTRA LIGHTS	0.14	4.3	0.34	Bright	0.12	6.0	0.54
Kent Golden Lights	0.10	8.5	0.78	Doral II	0.09	4.9	0.44
PLAYERS (BOX)	0.08	13.7	0.94	Now	0.09	1.6	0.16
Barclay	0.08	*	*	Barclay	0.08	*	*
Vantage	0.08	10.0	0.82	ALPINE	0.05	15.4	0.99
Newport Lights	0.07	8.4	0.78	Vantage Ultra Lights	0.05	5.2	0.42
Vantage Ultra Lights	0.06	5.3	0.46	Kent Golden Lights	0.04	8.9	0.79
Sterling Special Blend (Box)	-	11.5	0.87	<u>80 MM FILTER (BOX)</u>			
<u>100 MM FILTER SLIM</u>				MARLBORO	8.11	15.9	1.00
VIRGINIA SLIMS	0.91	14.7	0.96	Camel Lights	1.16	9.2	0.78
VIRGINIA SLIMS LIGHTS (BOX)	0.85	8.8	0.66	Winston	0.53	14.9	1.05
More Lights (Box)	0.22	8.7	0.76	PARLIAMENT LIGHTS	0.44	8.7	0.66
Silva Thins	0.10	11.6	0.97	Barclay	0.12	*	*
				Kent	0.04	12.5	1.00
				Now	0.01	0.0	0.00
<u>100 MM FILTER SLIM MENTHOL</u>				<u>85 MM NONFILTER</u>			
VIRGINIA SLIMS LIGHTS (BOX)	1.00	9.3	0.65	Pall Mall	4.05	22.0	1.40
VIRGINIA SLIMS	0.78	14.3	0.96	Chesterfield King	0.48	21.4	1.40
Salem Slim Lights (Box)	0.41	8.4	0.71	P.M. COMMANDER	0.15	24.2	1.51
More Lights (Box)	0.15	8.3	0.71				
Silva Thins	0.02	10.8	0.91	<u>70 MM NONFILTER</u>			
<u>100 MM FILTER CHARCOAL</u>				Camel	2.47	19.3	1.36
Tareyton	0.60	12.2	0.94	Lucky Strike	0.95	23.8	1.49
PARLIAMENT LIGHTS	0.58	11.0	0.82	PHILIP MORRIS	0.02	19.1	1.19
Tareyton Long Lights	0.12	8.2	0.72				
Lark Lights	0.11	12.4	0.92				
Lark	0.05	14.3	1.00				

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

*The FTC has determined that its present methodology does not accurately measure the tar, nicotine and CO deliveries of cigarettes incorporating a "Barclay-type" filter.

ALPHABETICAL LISTING OF BRANDS WITH TAR AND NICOTINE CONTENT

Tar¹ and Nicotine² Content of Two Hundred Seven (207) Varieties of Domestic Cigarettes

BRAND	TYPE ³	TAR, ¹ MG/CIGT.	NICOTINE, ² MG/CIGT.	BRAND	TYPE ³	TAR, ¹ MG/CIGT.	NICO MG/C
ALPINE	F,M,SP, 85 mm	14	0.8	Golden Lights	F,M,SP, 85 mm	9	0.
Belair	F,M,SP, 85 mm	9	0.7	Golden Lights 100's	F,SP, 100 mm	9	0.
Belair	F,M,SP, 100 mm	9	0.7	Golden Lights 100's	F,M,SP, 100 mm	9	0.
BENSON & HEDGES	Reg., F,HP, 70 mm	1	0.1	Half & Half	F,SP, 85 mm	17	1.
BENSON & HEDGES	F,HP, 85 mm	15	1.1	Herbert Tareyton	NF,SP, 85 mm	26	1.
BENSON & HEDGES 100's	F,HP, 100 mm	17	1.1	Iceberg 100's	F,M,SP, 100 mm	3	0.
BENSON & HEDGES 100's	F,M,HP, 100 mm	17	1.1	Kent	F,HP, 80 mm	12	0.
BENSON & HEDGES 100's	F,SP, 100 mm	17	1.1	Kent	F,SP, 85 mm	12	0.
BENSON & HEDGES 100's	F,M,SP, 100 mm	17	1.1	Kent III	F,SP, 85 mm	3	0.
BENSON & HEDGES LIGHTS	F,SP, 100 mm	10	0.7	Kent	F,SP, 100 mm	14	1.
BENSON & HEDGES LIGHTS	F,M,SP, 100 mm	10	0.7	Kent	F,M,SP, 100 mm	15	1.
B & H DELUXE ULTRA LIGHTS	F,H,P, 100 mm	6	0.5	Kent III	F,SP, 100 mm	4	0.
B & H DELUXE ULTRA LIGHTS	F,M,HP, 100 mm	6	0.5	Kool	Reg.,NF,M,SP, 70 mm	20	1.
Bright	F,M,SP, 85 mm	6	0.5	Kool	F,M,HP, 80 mm	16	1.
Bright	F,M,SP, 100 mm	7	0.6	Kool	F,M,SP, 85 mm	17	1.
Bull Durham	F,SP, 85 mm	28	1.8	Kool Lights	F,M,SP, 85 mm	9	0.
CAMBRIDGE	F,HP, 85 mm	*	*	Kool Milds	F,M,SP, 85 mm	11	0.
CAMBRIDGE	F,SP, 85 mm	1	0.1	Kool Ultra	F,M,SP, 85 mm	**	**
CAMBRIDGE	F,SP, 100 mm	5	0.4	Kool Lights 100's	F,M,SP, 100 mm	10	0.
Camel	Reg.,NF,SP, 70 mm	20	1.2	Kool Milds	F,M,SP, 100 mm	11	0.
Camel	F,SP, 85 mm	15	1.0	Kool Super Longs	F,M,SP, 100 mm	15	1.
Camel Lights	F,HP, 80 mm	8	0.6	Kool Ultra 100's	F,M,SP, 100 mm	**	**
Camel Lights	F,SP, 85 mm	8	0.6	L & M	F,HP, 80 mm	14	0.
Camel Lights	F,SP, 100 mm	12	0.8	L & M	F,SP, 85 mm	14	0.
Carlton	F,HP, 85 mm	*	*	L & M Lights	F,SP, 85 mm	9	0.
Carlton	F,SP, 85 mm	1	0.1	L & M	F,SP, 100 mm	14	1.
Carlton	F,M,SP, 85 mm	1	0.1	L & M Lights	F,SP, 100 mm	8	0.
Carlton	F,M,HP, 100 mm	1	0.1	L & M Lights	F,M,SP, 100 mm	8	0.
Carlton	F,HP, 100 mm	1	0.1	Lark	F,SP, 85 mm	14	1.
Carlton 100's	F,SP, 100 mm	5	0.4	Lark Lights	F,SP, 85 mm	13	0.
Carlton 100's	F,M,SP, 100 mm	5	0.4	Lark 100's	F,SP, 100 mm	16	1.
Carlton	F,SP, 120 mm	6	0.6	Lark Lights 100's	F,SP, 100 mm	14	1.
Carlton	F,M,SP, 120 mm	6	0.5	Long Johns	F,SP, 120 mm	18	1.
Chesterfield	Reg.,NF,SP, 70 mm	21	1.2	Long Johns	F,M,SP, 120 mm	17	1.
Chesterfield	NF,SP, 85 mm	25	1.5	Lucky Strike	Reg.,NF,SP, 70 mm	24	1.
Chesterfield	F,SP, 85 mm	15	1.0	Lucky Strike	F,SP, 85 mm	11	0.
Chesterfield	F,SP 101 mm	15	1.0	Lucky Strike	F,HP, 85 mm	11	0.
Decade	F,SP, 85 mm	6	0.5	Lucky 100's	F,SP, 100 mm	3	0.
Decade	F,M,SP, 85 mm	6	0.5	MARLBORO	F,HP, 80 mm	17	1.
Doral II	F,SP, 85 mm	5	0.4	MARLBORO	F,M,HP, 80 mm	15	0.
Doral II	F,M,SP, 85 mm	5	0.4	MARLBORO	F,SP, 85 mm	17	1.
ENGLISH OVALS	Reg.,NF,HP, 70 mm	22	1.5	MARLBORO	F,M,SP, 85 mm	15	0.
ENGLISH OVALS	NF,HP, 85 mm	29	2.1	MARLBORO LIGHTS	F,HP, 85 mm	10	0.
Eve Lights	F,SP, 100 mm	13	1.0	MARLBORO LIGHTS	F,SP, 85 mm	11	0.
Eve Lights	F,M,SP, 100 mm	13	1.0	MARLBORO	F,HP, 100 mm	17	1.
Eve Lights	F,HP, 120 mm	14	1.0	MARLBORO	F,SP, 100 mm	17	1.
Eve Lights	F,M,HP, 120 mm	14	1.1	MARLBORO LIGHTS	F,SP, 100 mm	11	0.
GALAXY	F,SP, 85 mm	15	0.9	Max	F,SP, 120 mm	18	1.
Golden Lights	F,SP, 85 mm	9	0.7	Max	F,M,SP, 120 mm	18	1.

¹PM dry (tar) - milligrams total particulate matter less nicotine and water.²Milligrams total alkaloids reported as nicotine.³F = filter; NF = nonfilter; M = menthol; HP = hard pack; SP = soft pack; mm = millimeter

*Indicates "tar" below 0.5 mg; nicotine below 0.05 mg per cigarette.

**It is likely, the present tar and nicotine methodology does not measure accurately Brown & Williamson's Kool Ultra cigarettes. This problem exists with the Barclay cigarettes and; therefore, Barclay data is not reported.

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BRAND	TYPE ³	TAR ¹ MG/CIGT.	NICOTINE ² MG/CIGT.	BRAND	TYPE ³	TAR ¹ MG/CIGT.	NICOTINE ² MG/CIGT.
MERIT	F,SP, 85 mm	9	0.6	Rebel	F,SP, 85 mm	11	0.9
MERIT	F,M,SP, 85 mm	9	0.6	Rebel	F,SP, 100 mm	12	1.0
MERIT ULTRA LIGHTS	F,SP, 85 mm	4	0.3	St. Moritz	F,SP, 100 mm	15	1.1
MERIT ULTRA LIGHTS	F,M,SP, 85 mm	4	0.3	St. Moritz	F,M,SP, 100 mm	15	1.1
MERIT ULTRA LIGHTS	F,SP, 100 mm	6	0.5	Salem	F,M,SP, 85 mm	16	1.0
MERIT ULTRA LIGHTS	F,M,SP, 100 mm	4	0.3	Salem Lights	F,M,SP, 85 mm	8	0.6
MERIT	F,SP, 100 mm	11	0.7	Salem Ultra	F,M,SP, 85 mm	4	0.4
MERIT	F,M,SP, 100 mm	10	0.7	Salem	F,M,SP, 100 mm	15	1.0
Montclair	F,M,SP, 85 mm	16	1.0	Salem Lights	F,M,SP, 100 mm	9	0.7
More Lights 100's	F,HP, 100 mm	8	0.6	Salem Slim Lights	F,M,HP, 100 mm	7	0.6
More Lights 100's	F,M,HP, 100 mm	7	0.6	Salem Ultra	F,M,SP, 100 mm	5	0.4
More	F,SP, 120 mm	17	1.1	SARATOGA	F,HP, 120 mm	14	0.9
More	F,M,SP, 120 mm	15	1.2	SARATOGA	F,M,HP, 120 mm	14	1.0
MULTIFILTER	F,SP, 85 mm	12	0.8	Satin	F,SP, 100 mm	10	0.8
MULTIFILTER	F,M,SP, 85 mm	13	0.8	Satin	F,M,SP, 100 mm	10	0.8
Newport Red	F,HP, 80 mm	13	1.0	Silva Thins	F,SP, 100 mm	12	1.0
Newport	F,M,HP, 80 mm	16	1.1	Silva Thins	F,M,SP, 100 mm	12	1.0
Newport Lights	F,M,HP, 80 mm	9	0.7	Spring 100's	F,M,SP, 100 mm	19	1.0
Newport Red	F,SP, 85 mm	13	1.0	Tall	F,SP, 120 mm	19	1.5
Newport	F,M,SP, 85 mm	17	1.1	Tall	F,M,SP, 120 mm	17	1.3
Newport Lights	F,M,SP, 85 mm	9	0.7	Tareyton	F,SP, 85 mm	14	1.0
Newport	F,M,SP, 100 mm	20	1.4	Tareyton Lights	F,SP, 85 mm	5	0.4
Newport Lights 100's	F,M,SP, 100 mm	10	0.8	Tareyton	F,SP, 100 mm	14	1.0
NORTHWIND	F,M,SP, 85 mm	10	0.7	Tareyton Long Lights	F,SP, 100 mm	7	0.6
NORTHWIND 100's	F,M,SP, 100 mm	11	0.7	Triumph	F,SP, 85 mm	3	0.4
Now	F,HP, 80 mm	*	*	Triumph	F,M,SP, 85 mm	3	0.3
Now	F,SP, 85 mm	1	0.1	Triumph	F,SP, 100 mm	4	0.4
Now	F,M,SP, 85 mm	1	0.1	Triumph	F,M,SP, 100 mm	4	0.5
Now	F,HP, 100 mm	*	*	True	F,SP, 85 mm	5	0.4
Now	F,SP, 100 mm	2	0.2	True	F,M,SP, 85 mm	5	0.4
Now	F,M,SP, 100 mm	2	0.2	True	F,SP, 100 mm	8	0.6
Old Gold Straight	NF,SP, 85 mm	26	1.6	True	F,M,SP, 100 mm	8	0.6
Old Gold Filters	F,SP, 85 mm	18	1.2	Vantage	F,SP, 85 mm	9	0.7
Old Gold Lights	F,SP, 85 mm	10	0.8	Vantage	F,M,SP, 85 mm	10	0.7
Old Gold Filters	F,SP, 100 mm	20	1.4	Vantage Ultra Lights	F,SP, 85 mm	5	0.4
Omni 100's	F,M,SP, 100 mm	7	0.6	Vantage Ultra Lights	F,M,SP, 85 mm	5	0.4
Pall Mall	NF,SP, 85 mm	24	1.4	Vantage	F,SP, 100 mm	9	0.7
Pall Mall	F,SP, 85 mm	17	1.1	Vantage Ultra Lights	F,SP, 100 mm	5	0.4
Pall Mall Extra Light	F,SP, 85 mm	7	0.6	Vantage Ultra Lights	F,M,SP, 100 mm	5	0.4
Pall Mall	F,SP, 100 mm	16	1.2	Viceroy	F,SP, 85 mm	15	0.9
Pall Mall Light	F,SP, 100 mm	9	0.8	Viceroy Rich Lights	F,SP, 85 mm	9	0.7
Pall Mall Light	F,M,SP, 100 mm	13	1.0	Viceroy Super Longs	F,SP, 100 mm	14	1.0
PARLIAMENT LIGHTS	F,HP, 80 mm	9	0.6	Viceroy Rich Lights	F,SP, 100 mm	10	0.8
PARLIAMENT LIGHTS	F,SP, 85 mm	10	0.7	VIRGINIA SLIMS	F,SP, 100 mm	15	1.0
PARLIAMENT LIGHTS 100's	F,SP, 100 mm	11	0.9	VIRGINIA SLIMS	F,M,SP, 100 mm	15	1.0
PHILIP MORRIS	NF,SP, 70 mm	22	1.3	VIRGINIA SLIMS LIGHTS	F,HP, 100 mm	8	0.6
PHILIP MORRIS COMMANDER	NF,SP, 85 mm	27	1.6	VIRGINIA SLIMS LIGHTS	F,M,HP, 100 mm	8	0.6
Picayune	Reg.,NF,SP, 70 mm	18	1.0	Winston	F,HP, 80 mm	16	1.0
PLAYERS	Reg.,NF,HP, 70 mm	27	1.9	Winston	F,SP, 85 mm	15	1.0
Raleigh	NF,SP, 85 mm	24	1.4	Winston Lights	F,SP, 85 mm	9	0.6
Raleigh	F,SP, 85 mm	15	1.0	Winston Ultra	F,SP, 85 mm	5	0.4
Raleigh Lights	F,SP, 85 mm	9	0.7	Winston 100's	F,SP, 100 mm	16	1.1
Raleigh	F,SP, 100 mm	16	1.1	Winston Lights 100's	F,SP, 100 mm	12	0.8
Raleigh Lights 100's	F,SP, 100 mm	10	0.8	Winston Ultra	F,SP, 100 mm	5	0.4
				Winston International	F,SP, 100 mm	16	1.0

¹TPM dry (tar) - milligrams total particulate matter less nicotine and water.²Milligrams total alkaloids reported as nicotine.³F = filter; NF = nonfilter; M = menthol; HP = hard pack; SP = soft pack; mm = millimeter

*Indicates "tar" below 0.5 mg; nicotine below 0.05 mg per cigarette.

BRANDS RANKED ACCORDING TO FTC TAR

BRAND	SIZE	FTC TAR, NICOTINE,		BRAND	SIZE	FTC TAR, NICOTINE,	
		MG/CIGT.	MG/CIGT.			MG/CIGT.	MG/CIGT.
1. CAMBRIDGE (BOX)	KF	0.00	0.00	51. Tareyton Long Lights	100C	8.2	0.72
2. Carlton (Box)	KF	0.00	0.00	52. Newport Lights	LF	8.2	0.74
3. Now (Box)	LF	0.00	0.00	53. Newport Lights	KFM	8.2	0.76
4. Carlton (Box)	100	0.8	0.10	54. More Lights Men. (Box)	100M	8.3	0.71
5. CAMBRIDGE	KF	1.1	0.11	55. Kool Lights	KFM	8.4	0.68
6. Carlton Men.	KFM	1.1	0.12	56. Salem Slim Lights (Box)	100M	8.4	0.71
7. BENSON & HEDGES (BOX)	RF	1.4	0.14	57. Newport Lights	100M	8.4	0.78
8. Now	KF	1.4	0.16	58. Kent Golden Lights Men.	100M	8.5	0.78
9. Carlton	KF	1.6	0.15	59. Camel Lights	KF	8.6	0.66
10. Now Men.	KFM	1.6	0.16	60. Kent Golden Lights	100	8.6	0.82
11. Now Men.	100M	3.2	0.28	61. PARLIAMENT LIGHTS (BOX)	LF	8.7	0.66
12. Kent III	KF	3.2	0.36	62. More Lights (Box)	100	8.7	0.76
13. Triumph	KF	3.4	0.36	63. VA. SLIMS LIGHTS (BOX)	100	8.8	0.66
14. Now	100	3.5	0.35	64. Kent Golden Lights Men.	KFM	8.9	0.79
15. Triumph Men.	KFM	3.6	0.38	65. Vantage	KF	9.1	0.74
16. MERIT ULTRA LIGHTS MEN.	KFM	3.8	0.30	66. Vantage	100	9.1	0.74
17. Iceberg 100's	100M	3.8	0.34	67. Camel Lights (Box)	LF	9.2	0.78
18. MERIT ULTRA LIGHTS	KF	4.1	0.34	68. VA. SLIMS LIGHTS MEN. (BOX)	100M	9.3	0.65
19. MERIT ULTRA LIGHTS	100	4.2	0.37	69. Vantage Men.	KFM	9.3	0.73
20. MERIT ULTRA LIGHTS MEN.	100M	4.3	0.34	70. Old Gold Lights	KF	9.3	0.91
21. CAMBRIDGE	100	4.4	0.38	71. PARLIAMENT LIGHTS	KF	9.4	0.70
22. Dorat II	KF	4.5	0.42	72. True	100	9.4	0.87
23. Kent III	100	4.6	0.48	73. True Men.	100M	9.5	0.91
24. Triumph	100	4.6	0.49	74. Salem Lights	100M	9.6	0.79
25. Winston Ultra Lights	100	4.8	0.41	75. MERIT MEN.	100M	9.7	0.69
26. Dorat II Men.	KFM	4.9	0.44	76. MERIT	100	9.7	0.72
27. Triumph Men.	100M	4.9	0.50	77. Salem Lights	KFM	9.7	0.76
28. Carlton	100	5.0	0.42	78. Kool Lights	100M	9.7	0.77
29. Tareyton Lights	KFC	5.0	0.42	79. Raleigh Lights	100	9.7	0.79
30. Vantage Ultra Lights Men.	KFM	5.2	0.42	80. B & H LIGHTS	100	9.8	0.71
31. Vantage Ultra Lights	100	5.2	0.45	81. Satin Men.	100M	9.8	0.88
32. Winston Ultra Lights	KF	5.3	0.45	82. B & H LIGHTS	100M	9.9	0.71
33. Carlton Men.	100M	5.3	0.46	83. Belair	KFM	10.0	0.77
34. Vantage Ultra Lights Men.	100M	5.3	0.46	84. Pall Mall Light	100	10.0	0.80
35. True Men.	KFM	5.3	0.50	85. Vantage Men.	100M	10.0	0.82
36. B & H DELUXE U.L. (BOX)	100	5.5	0.41	86. Raleigh Lights	KF	10.2	0.79
37. B & H DELUXE U.L. MEN. (BOX)	100M	5.5	0.41	87. Satin	100	10.2	0.93
38. Salem Ultra Lights	KFM	5.5	0.44	88. Winston Lights	KF	10.3	0.80
39. True	KF	5.5	0.53	89. Viceroy Rich Lights	KF	10.3	0.80
40. Vantage Ultra Lights	KF	5.7	0.46	90. Kool Milds	KFM	10.4	0.74
41. Salem Ultra Lights	100M	5.7	0.48	91. HARLBORO LIGHTS (BOX)	KF	10.6	0.74
42. Bright	KFM	6.0	0.54	92. Camel Lights	100	10.8	0.81
43. Carlton Men.	120M	6.6	0.60	93. Silva Thins Men.	100M	10.8	0.91
44. Bright	100M	6.8	0.60	94. Lucky Strike (Box)	KF	10.9	0.87
45. Pall Mall Extra Light	KF	6.9	0.65	95. PARLIAMENT LIGHTS	100C	11.0	0.82
46. Carlton	120	7.2	0.65	96. Lucky Strike	100	11.0	0.93
47. Belair	100M	7.5	0.58	97. HARLBORO LIGHTS	KF	11.1	0.75
48. MERIT	KF	7.7	0.58	98. Lucky Strike	KF	11.1	0.77
49. MERIT MENTHOL	KFM	7.8	0.57	99. Winston Lights	100	11.1	0.88
50. Kent Golden Lights	KF	8.1	0.74	100. HARLBORO LIGHTS	100	11.2	0.80

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BRANDS RANKED ACCORDING TO FTC TAR

BRAND	SIZE	FTC TAR, NICOTINE,		BRAND	SIZE	FTC TAR, NICOTINE,	
		MG/CIGT.	MG/CIGT.			MG/CIGT.	MG/CIGT.
101. MARLBORO LIGHTS (BOX)	100	11.5	0.81	151. Kool	KFM	15.6	1.02
102. Viceroy Rich Lights	100	11.5	0.86	152. B & H MEN. (BOX)	100M	15.6	1.06
103. Eve Slim Lights (Box)	100	11.5	0.94	153. Eve Lights Men. (Box)	120M	15.6	1.25
104. Sterling Special Blend				154. Viceroy	KF	15.7	1.01
Men. (Box)	100M	11.5	0.87	155. MARLBORO (BOX)	LF	15.9	1.00
105. Sterling Special Blend (Box)	100	11.5	0.92	156. Winston	100	16.0	1.24
106. PLAYERS (BOX)	KF	11.6	0.81	157. Newport (Box)	LFM	16.0	1.26
107. Silva Thins	100	11.6	0.97	158. Kent Men.	100M	16.0	1.34
108. Eve Slim Lights Men. (Box)	100M	11.7	0.94	159. MARLBORO	KF	16.1	1.05
109. B & H MULTIFILTER MEN.	KFMC	11.8	0.81	160. B & H MEN.	100M	16.1	1.09
110. PLAYERS MEN. (BOX)	KFM	11.9	0.82	161. Kool (Box)	LFM	16.1	1.20
111. Lark Lights	KFC	11.9	0.86	162. Salem	100M	16.1	1.26
112. Kent	KF	12.0	0.97	163. BENSON & HEDGES (BOX)	100	16.2	1.05
113. B & H MULTIFILTER	KFC	12.1	0.79	164. MARLBORO	100	16.2	1.10
114. Chesterfield	KF	12.1	0.92	165. MARLBORO (BOX)	100	16.3	1.09
115. Tareyton	100C	12.2	0.94	166. More Men.	120M	16.3	1.33
116. L & M	KF	12.4	0.90	167. BENSON & HEDGES	100	16.4	1.09
117. Lark Lights	100C	12.4	0.92	168. Winston	KF	16.6	1.16
118. Kent (Box)	LF	12.5	1.00	169. Winston International (Box)	93	16.6	1.20
119. Pall Mall Light Men.	100M	12.6	1.10	170. P.M. INTERNATIONAL (BOX)	100	16.7	1.11
120. Tareyton	KFC	12.7	0.88	171. Old Gold	KF	16.7	1.36
121. L & M	100	12.9	0.94	172. Pall Mall	KF	16.8	1.28
122. Newport Non-Menthol (Box)	LF	12.9	1.10	173. P.M. INTERNATIONAL MEN.(BOX)	100M	17.0	1.18
123. Lark	KFC	13.1	0.98	174. Newport	KFM	17.0	1.34
124. PLAYERS (BOX)	100	13.2	0.88	175. More	120	17.3	1.32
125. SARATOGA MEN. (BOX)	120M	13.3	0.94	176. Chesterfield	RNF	17.9	1.23
126. HI-LITE (BOX)	100	13.3	1.04	177. Long Johns	120	18.0	1.54
127. Kool	100M	13.4	0.90	178. Half & Half	KF	18.4	1.56
128. L & M (Box)	LF	13.4	0.99	179. Max Men.	120M	18.6	1.53
129. SARATOGA (BOX)	120	13.7	0.94	180. Max	120	18.8	1.54
130. PLAYERS MEN. (BOX)	100M	13.7	0.94	181. Tall Men.	120M	18.8	1.55
131. Newport Non-Menthol	KF	13.7	1.13	182. Long Johns Men.	120M	19.0	1.68
132. Kent	100	13.7	1.14	183. PHILIP MORRIS	RNF	19.1	1.19
133. St. Moritz	100	13.8	1.15	184. Newport	100M	19.1	1.54
134. Raleigh	KF	13.9	0.94	185. Camel	RNF	19.3	1.36
135. GALAXY	KFC	14.0	0.98	186. Spring	100M	19.4	1.18
136. St. Moritz Men.	100M	14.0	1.16	187. Old Gold	100	20.0	1.69
137. VA. SLIMS MEN.	100M	14.3	0.96	188. Kool	RNFM	21.0	1.42
138. Lark	100C	14.3	1.00	189. ENGLISH OVALS (BOX)	RNF	21.1	1.80
139. BENSON & HEDGES (BOX)	KF	14.6	1.20	190. Tall	120	21.3	1.68
140. VA. SLIMS	100	14.7	0.96	191. Chesterfield King	KNF	21.4	1.40
141. Viceroy	100	14.8	1.03	192. Pall Mall	KNF	22.0	1.40
142. Camel	KF	14.8	1.06	193. Picayune	RNF	22.7	1.55
143. Eve lights (Box)	120	14.8	1.18	194. PLAYERS (BOX)	RNF	23.7	2.02
144. Winston (Box)	LF	14.9	1.05	195. Lucky Strike	RNF	23.8	1.49
145. Raleigh	100	15.0	1.04	196. P.M. COMMANDER	KNF	24.2	1.51
146. Salem	KFM	15.0	1.08	197. Raleigh	KNF	24.8	1.55
147. Pall Mall	100	15.1	1.15	198. H. Tareyton	KNF	24.8	1.70
148. ALPINE	KFM	15.4	0.99	199. ENGLISH OVALS (BOX)	KNF	25.0	2.26
149. Montclair	KFM	15.4	1.10	200. Old Gold	KNF	25.4	1.79
150. MARLBORO MEN.	KFM	15.5	1.02	201. Bull Durham	KF	29.0	2.15

85mm
PLAIN

2050081966

ULTRA LOW TAR FILTER CIGARETTES (BOX)

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right) of

	<i>CB6B</i> Cambridge (Box)	<i>CR6B</i> Carlton (Box)	<i>NO4B</i> Now (Box)	<i>B46</i> Barclay* (Box)
¹ Sales	----	----	0.01	0.12
<u>Smoke</u>				
FTC Tar, mg/cigt.	0.00	0.00	0.00	*
Nicotine, mg/cigt.	0.00	0.00	0.00	*
Puffs/cigt.	8.2	6.9	6.9	*
Filtration Eff., %	-	-	-	74
Filler Rod TPM, mg/cigt.	-	-	-	33.0
CO, mg/cigt.	<0.4	<0.4	<0.4	*
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	4.8/122	4.6/117	4.0/102	0.9/23
Length, mm	82.8	82.7	79.2	79.8
Circumference, mm	25.0	24.8	24.9	25.0
<u>Paper</u>				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.5	0.8	0.8	0.8
Porosity, sec.	16	7**	16	16
<u>Filter</u>				
Type	CA	CA	CA	CA
Inner	----	----	----	----
Outer	----	----	----	----
RTD, in./mm of H ₂ O	10.3/262	10.1/256	6.9/175	4.2/107
Length, mm	31.6	32.0	27.6	27.0
Weight, g	0.25	0.26	0.19	0.17
Fiber denier/shape	1.7/Y	1.9/Y	1.8/Y	2.4/Y
Inner	----	----	----	----
Outer	----	----	----	----
Tipping Paper				
Length, mm	36	36	32	32
Color	White	White	White	Cork
Ventilation, %	97	98	96	84
<u>Filler</u>				
Total alkaloids, % (DWB)	2.30	2.14	2.95	2.65
Total red. sugars, % (DWB)	5.4	7.0	7.2	7.8
Reconstituted Tob., %	17	17	None	None
Expanded Stems, %	None	None	None	None
Floated Material, %	30	51	93	32
Wt. of tob., g (Corrected to 12.5% O.V.)	0.518	0.470	0.431	0.539
Rod Length, mm	51.2	50.7	51.6	52.8
Rod Density, g/cc	0.202	0.189	0.169	0.205

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

*The FTC has determined that its present methodology does not accurately measure the tar, nicotine and CO deliveries of cigarettes incorporating a "Barclay-type" filter.

**These cigarette papers are mechanically perforated.

2050081967

✓ 7

ULTRA LOW TAR 85 MM FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<u>CB6</u> Cambridge	<u>NO6</u> Now	<u>CR6</u> Carlton	<u>KT6</u> Kent III
¹ Sales	0.04	0.19	0.62	0.60
<u>Smoke</u>				
FTC Tar, mg/cigt.	1.1	1.4	1.6	3.2
Nicotine, mg/cigt.	0.11	0.16	0.15	0.36
Puffs/cigt.	7.6	7.2	6.8	7.3
Filtration Eff., %	78	77	76	65
Filler Rod TPM, mg/cigt.	27.1	27.3	23.8	31.2
CO, mg/cigt.	1.5	2.0	2.2	2.8
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	4.3/109	4.6/117	4.7/119	3.6/91
Length, mm	83.6	83.6	82.6	84.0
Circumference, mm	25.0	24.9	24.8	24.9
<u>Paper</u>				
<u>Components</u>				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.6	0.4	0.9	1.6
Porosity, sec.	14	18	14	24
<u>Filter</u>				
Type	CA	CA	CA	----
Inner	----	----	----	CA
Outer	----	----	----	CA
RTD, in./mm of H ₂ O	6.4/162	6.8/173	6.1/155	4.2/107
Length, mm	27.0	26.9	25.0	24.9
Weight, g	0.20	0.19	0.18	0.15
Fiber denier/shape	2.0/Y	2.1/Y	2.0/Y	----
Inner	----	----	----	1.8/Y
Outer	----	----	----	2.9/Y
<u>Tipping Paper</u>				
Length, mm	32	31	30	32
Color	White	White	White	White
Ventilation, %	78	76	72	66
<u>Filler</u>				
Total alkaloids, % (DWB)	2.18	2.39	2.13	2.54
Total red. sugars, % (DWB)	6.1	6.1	6.8	8.1
Reconstituted Tob., %	17	15	17	14
Expanded Stems, %	None	None	None	None
Floated Material, %	30	52	51	25
Wt. of tob., g (Corrected to 12.5% O.V.)	0.576	0.510	0.522	0.586
Rod Length, mm	56.6	56.7	57.6	59.1
Rod Density, g/cc	0.205	0.182	0.184	0.201

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

2050081968

ULTRA LOW TAR 85 MM FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<i>MU6</i> Merit Ultra Lights	<i>DR6</i> Doral II	<i>WU6</i> Winston Ultra Lights
¹ Sales	0.62	0.11	0.22
<u>Smoke</u>			
FTC Tar, mg/cigt.	4.1	4.5	5.3
Nicotine, mg/cigt.	0.34	0.42	0.45
Puffs/cigt.	7.6	8.1	7.0
Filtration Eff., %	62	43	62
Filler Rod TPM, mg/cigt.	28.5	29.6	28.7
CO, mg/cigt.	4.7	3.0	6.6
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	4.3/109	2.9/74	4.6/117
Length, mm	83.7	83.8	83.6
Circumference, mm	25.0	25.0	24.9
<u>Paper</u>			
Components			
Type	Cit.	Cit.	Cit.
Percent	1.9	0.8	1.6
Porosity, sec.	13	18	25
<u>Filter</u>			
Type	CA	----	CA
Inner	----	CA	----
Outer	----	PL	----
RTD, in./mm of H ₂ O	5.2/132	3.0/76	5.2/132
Length, mm	27.0	25.1	26.9
Weight, g	0.19	0.30	0.19
Fiber denier/shape	2.8/Y	----	2.7/Y
Inner	----	2.0/Y	----
Outer	----	----	----
<u>Tipping Paper</u>			
Length, mm	32	34	31
Color	Cork	White	Cork
Ventilation, %	59	67	52
<u>Filler</u>			
Total alkaloids, % (DWB)	1.96	1.94	2.18
Total red. sugars, % (DWB)	5.9	7.3	7.0
Reconstituted Tob., %	20	22	23
Expanded Stems, %	None	None	None
Floated Material, %	18	25	25
Wt. of tob., g (Corrected to 12.5% O.V.)	0.639	0.662	0.602
Rod Length, mm	56.7	58.7	56.7
Rod Density, g/cc	0.226	0.227	0.215

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

2050081969

ULTRA LOW TAR 85 MM FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

<u>✓</u> True	<u>V</u> Vantage Ultra Lights	<u>BY</u> Barclay*	
0.60	0.37	0.48	¹ Sales
5.5	5.7	*	<u>Smoke</u>
0.53	0.46	*	FTC Tar, mg/cigt.
8.3	7.1	*	Nicotine, mg/cigt.
52	63	85	Puffs/cigt.
29.4	30.2	34.5	Filtration Eff., %
4.0	6.8	*	Filler Rod TPM, mg/cigt.
			CO, mg/cigt.
1.8/46	4.6/117	0.8/20	<u>Cigarette</u>
84.3	83.8	83.9	Total RTD, in./mm of H ₂ O
25.0	24.9	25.0	Length, mm
			Circumference, mm
			<u>Paper</u>
Cit.	Cit.	Cit.	Components
0.5	1.4	0.8	Type
23	27	14	Percent
			Porosity, sec.
-----	CA	CA	<u>Filter</u>
CA	-----	-----	Type
PL	-----	-----	Inner
3.1/79	5.1/130	3.9/99	Outer
24.9	27.0	27.0	RTD, in./mm of H ₂ O
0.17	0.19	0.17	Length, mm
-----	2.6/Y	2.4/Y	Weight, g
1.8/Y	-----	-----	Fiber denier/shape
-----	-----	-----	Inner
			Outer
30	31	32	Tipping Paper
White	White	Cork	Length, mm
67	50	87	Color
			Ventilation, %
2.28	2.18	2.75	<u>Filler</u>
6.3	7.2	7.5	Total alkaloids, % (DWB)
20	22	None	Total red. sugars, % (DWB)
None	None	None	Reconstituted Tob., %
12	26	32	Expanded Stems, %
			Floated Material, %
0.651	0.606	0.550	Wt. of tob., g (Corrected to 12.5% O.V.)
59.4	56.8	56.9	Rod Length, mm
0.220	0.216	0.194	Rod Density, g/cc

*The FTC has determined that its present methodology does not accurately measure the tar, nicotine and CO deliveries of cigarettes incorporating a "Barclay-type" filter.

2050081970

LOW TAR 85 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<u>ME6</u> Merit	<u>KG6</u> Kent Golden Lights	<u>CL6</u> Camel Lights
¹ Sales	2.25	0.62	1.16
<u>Smoke</u>			
FTC Tar, mg/cigt.	7.7	8.1	8.6
Nicotine, mg/cigt.	0.58	0.74	0.66
Puffs/cigt.	8.2	7.2	7.8
Filtration Eff., %	61	53	60
Filler Rod TPM, mg/cigt.	28.7	28.8	30.2
CO, mg/cigt.	9.6	8.6	11.2
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	5.3/135	3.9/99	5.3/135
Length, mm	83.8	83.8	84.0
Circumference, mm	25.0	24.9	24.9
<u>Paper</u>			
Components			
Type	Cit.	Cit.	Cit.
Percent	0.8	1.9	1.6
Porosity, sec.	15	24	25
<u>Filter</u>			
Type	CA	CA	CA
Inner	----	----	----
Outer	----	----	----
RTD, in./mm of H ₂ O	4.7/119	3.3/84	4.6/117
Length, mm	27.0	25.0	27.0
Weight, g	0.18	0.15	0.18
Fiber denier/shape	2.7/Y	3.1/Y	2.4/Y
Inner	----	----	----
Outer	----	----	----
Tipping Paper			
Length, mm	32	32	31
Color	Cork	White	Cork
Ventilation, %	32	39	29
<u>Filler</u>			
Total alkaloids, % (DWB)	1.94	2.24	1.90
Total red. sugars, % (DWB)	6.9	9.4	7.4
Reconstituted Tob., %	22	19	24
Expanded Stems, %	2	None	None
Floated Material, %	12	12	15
Wt. of tob., g (Corrected to 12.5% O.V.)	0.684	0.654	0.687
Rod Length, mm	56.8	58.8	57.0
Rod Density, g/cc	0.242	0.225	0.244

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

2050081971

LOW TAR 85 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

✓ VE6	✓ PR6	✓ RG6	✓ WL6	
Vantage	Parliament Lights	Raleigh Lights	Winston Lights	
2.05	0.37	0.18	2.57	¹ Sales
9.1	9.4	10.2	10.3	Smoke
0.74	0.70	0.79	0.80	FTC Tar, mg/cigt.
7.7	8.1	7.4	8.4	Nicotine, mg/cigt.
62	55	48	58	Puffs/cigt.
30.7	31.2	28.3	31.4	Filtration Eff., %
12.0	10.1	10.2	11.4	Filler Rod TPM, mg/cigt.
				CO, mg/cigt.
4.1/104	4.8/122	4.0/102	5.3/135	Cigarette
83.8	83.8	83.7	84.0	Total RTD, in./mm of H ₂ O
25.0	25.0	25.0	24.9	Length, mm
				Circumference, mm
				Paper
Cit.	Cit.	Cit.	Cit.	Components
0.6	1.6	0.8	0.4	Type
15	16	16	23	Percent
				Porosity, sec.
CA	CA	CA	CA	Filter
----	----	----	----	Type
----	----	----	----	Inner
----	----	----	----	Outer
3.3/84	4.6/117	2.8/71	4.3/109	RTD, in./mm of H ₂ O
25.0	25.1 ²	24.9	27.0	Length, mm
0.28	0.14	0.16	0.18	Weight, g
1.6/R	2.5/Y	3.6/Y	2.8/Y	Fiber denier/shape
----	----	----	----	Inner
----	----	----	----	Outer
30	30	30	31	Tipping Paper
Cork	White	Cork	Cork	Length, mm
20	33	26	26	Color
				Ventilation, %
2.02	1.89	2.12	1.90	Filler
8.4	6.2	8.0	8.0	Total alkaloids, % (DWB)
22	22	12	23	Total red. sugars, % (DWB)
None	2	12	None	Reconstituted Tob., %
15	12	11	16	Expanded Stems, %
				Floated Material, %
0.692	0.703	0.681	0.688	Wt. of tob., g (Corrected
58.8	58.7	58.8	57.0	to 12.5% O.V.)
0.237	0.241	0.233	0.244	Rod Length, mm
				Rod Density, g/cc

²The reported value includes the recessed portion.

2050081972

LOW TAR 85 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<u>VLL6</u> Viceroy Rich Lights	<u>ML6B</u> Marlboro Lights (Box)	<u>LU6B</u> Lucky Strike (Box)	<u>ML6</u> Marlboro Lights
¹ Sales	0.11	1.75	0.42	4.14
<u>Smoke</u>				
FTC Tar, mg/cigt.	10.3	10.6	10.9	11.1
Nicotine, mg/cigt.	0.80	0.74	0.87	0.75
Puffs/cigt.	7.8	8.1	8.1	8.2
Filtration Eff., %	52	56	51	55
Filler Rod TPM, mg/cigt.	29.1	31.6	31.0	33.2
CO, mg/cigt.	9.3	11.7	10.7	12.2
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	4.3/109	5.0/127	4.4/112	5.1/130
Length, mm	83.6	82.8	82.9	83.9
Circumference, mm	25.1	24.8	24.8	24.8
<u>Paper</u>				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.2	0.6	0.7	0.6
Porosity, sec.	16	20	24	20
<u>Filter</u>				
Type	CA	CA	CA	CA
Inner	----	----	----	----
Outer	----	----	----	----
RTD, in./mm of H ₂ O	3.0/76	4.0/102	3.2/81	3.9/99
Length, mm	24.9	27.1	25.1	27.0
Weight, g	0.15	0.17	0.15	0.17
Fiber denier/shape	2.7/Y	3.0/Y	2.8/Y	3.0/Y
Inner	----	----	----	----
Outer	----	----	----	----
Tipping Paper				
Length, mm	30	31	30	31
Color	Cork	White	Cork	White
Ventilation, %	27	22	24	21
<u>Filler</u>				
Total alkaloids, % (DWB)	2.10	1.83	2.04	1.87
Total red. sugars, % (DWB)	8.3	6.4	9.2	7.0
Reconstituted Tob., %	11	20	15	20
Expanded Stems, %	11	2	4	2
Floated Material, %	11	12	14	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.688	0.678	0.688	0.687
Rod Length, mm	58.7	55.7	57.8	56.9
Rod Density, g/cc	0.233	0.249	0.244	0.247

2050081973

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

LOW TAR 85 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

✓
LU6✓
PA6B✓
KN6✓
LM6Lucky
StrikePlayers
(Box)

Kent

L & M

0.42

0.20

1.08

0.55

¹Sales

11.1

11.6

12.0

12.4

0.77

0.81

0.97

0.90

8.0

8.2

8.5

7.3

51

50

45

45

31.9

31.4

29.0

27.0

11.0

11.7

11.7

12.3

Smoke

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

Filler Rod TPM, mg/cigt.

CO, mg/cigt.

4.0/102

4.2/107

3.6/91

4.4/112

82.8

82.9

84.2

84.6

25.0

25.0

25.1

24.7

Cigarette

Total RTD, in./mm of H₂O

Length, mm

Circumference, mm

Cit.

Cit.

Cit.

Cit.

0.7

0.6

0.7

1.4

23

19

23

7*

Paper

Components

Type

Percent

Porosity, sec.

CA

CA

CA

CA

3.1/79

2.9/74

2.5/64

2.6/66

25.1

27.0

21.0

24.8

0.16

0.17

0.12

0.15

2.8/Y

3.8/Y

3.0/Y

3.7/Y

30

32

25

30

Cork

Cork

White

White

26

24

29

Filter

Type

Inner

Outer

RTD, in./mm of H₂O

Length, mm

Weight, g

Fiber denier/shape

Inner

Outer

Tipping Paper

Length, mm

Color

Ventilation, %

2.01

1.85

1.93

1.84

10.1

6.8

8.4

10.5

15

20

19

15

4

2

None

7

14

11

12

18

0.682

0.688

0.720

0.656

57.7

55.9

63.2

59.8

0.240

0.249

0.227

0.226

Filler

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Floated Material, %

Wt. of tob., g (Corrected
to 12.5% O.V.)

Rod Length, mm

Rod Density, g/cc

*These cigarette papers are mechanically perforated.

2050081974

LOW TAR 85 MM FILTER CIGARETTES(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<u>RL6</u> <u>Raleigh</u>	<u>CM6</u> <u>Camel</u>
¹ Sales	0.75	1.29
<u>Smoke</u>		
FTC Tar, mg/cigt.	13.9	14.8
Nicotine, mg/cigt.	0.94	1.06
Puffs/cigt.	7.4	8.8
Filtration Eff., %	47	45
Filler Rod TPM, mg/cigt.	28.0	30.4
CO, mg/cigt.	16.4	14.2
<u>Cigarette</u>		
Total RTD, in./mm of H ₂ O	4.5/114	4.2/107
Length, mm	84.0	83.9
Circumference, mm	25.1	24.9
<u>Paper</u>		
Components		
Type	Cit.	Cit.
Percent	0.5	0.8
Porosity, sec.	26	17
<u>Filter</u>		
Type	CA	CA
Inner	----	----
Outer	----	----
RTD, in./mm of H ₂ O	2.5/64	2.7/68
Length, mm	21.0	21.0
Weight, g	0.12	0.13
Fiber denier/shape	2.8/Y	3.0/Y
Inner	----	----
Outer	----	----
Tipping Paper		
Length, mm	26	25
Color	Cork	Cork
Ventilation, %	----	14
<u>Filler</u>		
Total alkaloids, % (DWB)	1.93	1.86
Total red. sugars, % (DWB)	8.3	7.2
Reconstituted Tob., %	12	24
Expanded Stems, %	12	None
Floated Material, %	4	15
Wt. of tob., g (Corrected to 12.5% O.V.)	0.737	0.758
Rod Length, mm	63.0	62.9
Rod Density, g/cc	0.233	0.244

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

2050081975

FULL FLAVORED 85 MM FILTER CIGARETTES

15 ✓

(16 MG TAR OR MORE)

(Brands ranked according to FTC Tar, left to right)

	<u>VC6</u>	<u>MR6</u>	<u>WNG</u>	<u>OG6</u>
	<u>Viceroy</u>	<u>Marlboro</u>	<u>Winston</u>	<u>Old Gold</u>
¹ Sales	0.95	7.84	6.92	0.23
<u>Smoke</u>				
FTC Tar, mg/cigt.	15.7	16.1	16.6	16.7
Nicotine, mg/cigt.	1.01	1.05	1.16	1.36
Puffs/cigt.	7.5	9.0	9.5	8.4
Filtration Eff., %	40	47	48	46
Filler Rod TPM, mg/cigt.	29.2	32.4	32.6	33.6
CO, mg/cigt.	15.8	15.2	15.1	19.1
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	4.6/117	4.7/119	4.8/122	4.7/119
Length, mm	83.7	83.8	84.0	84.2
Circumference, mm	25.0	24.8	25.0	25.1
<u>Paper</u>				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.6	0.6	0.4	0.8
Porosity, sec.	24	23	22	35
<u>Filter</u>				
Type	CA	CA	CA	CA
Inner	----	----	----	----
Outer	----	----	----	----
RTD, in./mm of H ₂ O	2.0/51	2.8/71	3.1/79	2.6/66
Length, mm	20.8	21.0	21.0	21.1
Weight, g	0.12	0.13	0.14	0.12
Fiber denier/shape	3.9/Y	3.2/Y	3.6/Y	3.0/Y
Inner	----	----	----	----
Outer	----	----	----	----
Tipping Paper				
Length, mm	26	25	25	26
Color	Cork	Cork	Cork	Cork
Ventilation, %	----	11	14	----
<u>Filler</u>				
Total alkaloids, % (DWB)	1.89	1.87	1.89	2.30
Total red. sugars, % (DWB)	8.2	6.8	8.2	8.7
Reconstituted Tob., %	11	20	23	19
Expanded Stems, %	11	2	None	None
Floated Material, %	11	12	16	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.714	0.763	0.768	0.729
Rod Length, mm	62.9	62.8	63.0	63.1
Rod Density, g/cc	0.228	0.248	0.247	0.230

85 mm
MENTHOL

2050081976

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

ULTRA LOW TAR 85 MM FILTER MENTHOL CIGARETTES

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<i>CR6M</i> Carlton	<i>NO6M</i> Now	<i>MU6M</i> Merit Ultra Lights	<i>DR6M</i> Doral II	<i>VU6M</i> Vantage Ultra Lights
¹ Sales	0.25	0.09	0.16	0.09	0.05
<u>Smoke</u>					
FTC Tar, mg/cigt.	1.1	1.6	3.8	4.9	5.2
Nicotine, mg/cigt.	0.12	0.16	0.30	0.44	0.42
Puffs/cigt.	6.4	7.0	7.5	7.6	7.7
Filtration Eff., %	77	74	63	43	62
Filler Rod TPM, mg/cigt.	25.0	27.4	28.6	26.9	30.6
CO, mg/cigt.	1.2	1.8	3.9	3.4	6.5
<u>Cigarette</u>					
Total RTD, in./mm of H ₂ O	4.3/109	4.6/117	3.9/99	2.8/71	4.4/112
Length, mm	82.6	83.8	83.7	83.8	84.0
Circumference, mm	24.8	24.9	25.0	24.9	25.0
<u>Paper</u>					
Components					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	0.8	0.4	1.8	0.8	1.5
Porosity, sec.	14	17	14	18	24
<u>Filter</u>					
Type	CA	CA	CA	----	CA
Inner	----	----	----	CA	----
Outer	----	----	----	PL	----
RTD, in./mm of H ₂ O	6.0/152	6.8/173	4.8/122	2.9/74	5.1/130
Length, mm	25.0	26.9	27.1	25.0	27.0
Weight, g	0.18	0.19	0.19	0.30	0.20
Fiber denier/shape	1.9/Y	1.9/Y	2.8/Y	----	2.4/Y
Inner	----	----	----	2.2/Y	----
Outer	----	----	----	----	----
Tipping Paper					
Length, mm	30	31	32	34	31
Color	White	White	Cork	White	White
Ventilation, %	76	74	62	64	55
<u>Filler</u>					
Total alkaloids, % (DWB)	2.14	2.44	1.93	2.02	2.01
Total red. sugars, % (DWB)	7.3	5.9	5.6	7.6	7.5
Reconstituted Tob., %	17	15	20	22	22
Expanded Stems, %	None	None	None	None	None
Floated Material, %	51	52	18	25	28
Wt. of tob., g (Corrected to 12.5% O.V.)	0.514	0.569	0.636	0.641	0.615
Rod Length, mm	57.6	56.9	56.6	58.8	57.0
Rod Density, g/cc	0.181	0.179	0.225	0.219	0.217
<u>Menthol, mg/cigt.</u>					
Smoke	0.17	0.22	0.36	0.35	0.32
Filler	5.1	4.0	3.2	3.3	3.0
Filter	2.1	3.6	2.0	0.8	1.2
² Menthol, ug/puff	25	31	47	44	40

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by the number of puffs.

2050081977

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

TUL6M

SUL6M

BY6M

KUL6M

TrueSalem
Ultra
LightsBarclay*Kool
Ultra*

0.29

0.24

0.08

0.15

¹Sales5.3
0.50
8.3
53
28.3
4.25.5
0.44
7.2
62
29.3
6.8*
*
*
70
27.2
**
*
*
62
27.0
*SmokeFTC Tar, mg/cigt.
Nicotine, mg/cigt.
Puffs/cigt.
Filtration Eff., %
Filler Rod TPM, mg/cigt.
CO, mg/cigt.1.6/41
84.4
25.04.7/119
83.9
24.90.8/20
84.0
25.01.1/28
83.8
25.0CigaretteTotal RTD, in./mm of H₂O
Length, mm
Circumference, mmCit.
0.8
22Cit.
1.5
24Cit.
0.4
10Cit.
0.8
14PaperComponents
Type
Percent
Porosity, sec.-----
CA
PL
3.5/89
24.8
0.17

1.8/Y
-----CA

5.2/132
26.9
0.19
2.6/Y

-----CA

3.6/91
27.1
0.16
2.3/Y

-----CA

3.0/76
27.0
0.15
4.0/Y

-----FilterType
Inner
Outer
RTD, in./mm of H₂O
Length, mm
Weight, g
Fiber denier/shape
Inner
Outer
Tipping Paper
Length, mm
Color
Ventilation, %30
White
6631
White
5032
Cork
8632
Cork
792.22
5.9
20
None
122.06
6.7
24
None
292.08
7.7
7
8
262.26
7.7
10
9
21FillerTotal alkaloids, % (DWB)
Total red. sugars, % (DWB)
Reconstituted Tob., %
Expanded Stems, %
Floated Material, %
Wt. of tob., g (Corrected
to 12.5% O.V.)
Rod Length, mm
Rod Density, g/cc0.654
59.6
0.2190.597
57.0
0.2130.593
56.9
0.2090.602
56.8
0.212Menthol, mg/cigt.0.28
2.2
1.00.35
2.8
1.40.06
2.5
1.60.10
2.6
1.4Smoke
Filler
Filter

33

47

7

13

²Menthol, µg/puff

*The FTC has determined that its present methodology does not accurately measure the tar, nicotine and CO deliveries of cigarettes incorporating a "Barclay-type" filter.

2050081978

LOW TAR 85 MM FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

✓
KG6M

	BT6M	ME6M	NG6M	KI6M	Kent Golden Lights
	Bright	Merit	Newport Lights	Kool Lights	
¹ Sales	0.12	0.34	0.28	0.25	0.04
<u>Smoke</u>					
FTC Tar, mg/cigt.	6.0	7.8	8.2	8.4	8.9
Nicotine, mg/cigt.	0.54	0.57	0.76	0.68	0.79
Puffs/cigt.	7.1	8.0	7.0	7.4	6.9
Filtration Eff., %	58	60	51	54	49
Filler Rod TPM, mg/cigt.	31.0	28.8	28.9	28.8	28.3
CO, mg/cigt.	7.2	9.1	8.0	9.2	8.7
<u>Cigarette</u>					
Total RTD, in./mm of H ₂ O	4.9/124	5.2/132	4.0/102	5.0/127	3.7/94
Length, mm	83.8	83.9	84.0	83.8	83.8
Circumference, mm	24.9	24.9	24.9	25.0	24.9
<u>Paper</u>					
Components					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	0.8	0.7	1.6	0.2	1.9
Porosity, sec.	17	15	23	16	22
<u>Filter</u>					
Type	CA	CA	CA	CA	CA
Inner	----	----	----	----	----
Outer	----	----	----	----	----
RTD, in./mm of H ₂ O	4.8/122	4.7/119	3.3/84	3.8/96	3.0/76
Length, mm	26.9	27.2	25.0	25.0	25.0
Weight, g	0.18	0.19	0.15	0.16	0.14
Fiber denier/shape	2.5/Y	2.6/Y	2.9/Y	2.5/Y	3.0/Y
Inner	----	----	----	----	----
Outer	----	----	----	----	----
Tipping Paper					
Length, mm	32	32	32	30	32
Color	White	Cork	Cork	Cork	White
Ventilation, %	42	32	35	32	32
<u>Filler</u>					
Total alkaloids, % (DWB)	2.02	1.80	2.29	2.08	2.16
Total red. sugars, % (DWB)	6.2	5.0	8.0	7.8	7.7
Reconstituted Tob., %	22	22	21	11	19
Expanded Stems, %	None	2	None	10	None
Floated Material, %	30	12	12	12	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.612	0.681	0.661	0.671	0.651
Rod Length, mm	56.9	56.7	59.0	58.8	58.8
Rod Density, g/cc	0.218	0.241	0.224	0.232	0.226
<u>Menthol, mg/cigt.</u>					
Smoke	0.42	0.59	0.38	0.32	0.37
Filler	2.9	2.9	2.0	1.7	1.8
Filter	2.0	2.0	0.9	0.9	1.0
² Menthol, µg/puff	57	74	52	42	53

2050081979

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by
number of puffs.

LOW TAR 85 MM FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

✓
VE6M✓
SG6M

BA6M

KM6M

VantageSalem
LightsBelairKool
Milds

0.37

2.49

0.59

1.20

¹Sales

9.3

9.7

10.0

10.4

Smoke

0.73

0.76

0.77

0.74

FTC Tar, mg/cigt.

7.6

7.7

7.1

6.9

Nicotine, mg/cigt.

63

58

50

50

Puffs/cigt.

30.2

30.6

29.4

28.6

Filtration Eff., %

11.9

11.1

9.0

10.6

Filler Rod TPM, mg/cigt.

CO, mg/cigt.

4.6/117

5.1/130

4.4/112

4.6/117

Cigarette

83.8

83.8

83.8

83.8

Total RTD, in./mm of H₂O

25.0

25.0

25.0

25.0

Length, mm

Circumference, mm

Cit.

Cit.

Cit.

Cit.

Paper

0.7

0.8

0.2

0.2

Components

17

18

16

16

Type

Percent

Porosity, sec.

CA

CA

CA

CA

Filter

Type

Inner

3.4/86

4.2/107

3.0/76

3.1/79

Outer

25.1

27.0

24.9

24.9

RTD, in./mm of H₂O

0.30

0.18

0.15

0.15

Length, mm

1.6/R

2.9/Y

2.8/Y

3.0/Y

Weight, g

Fiber denier/shape

Inner

Outer

30

31

30

30

Tipping Paper

Cork

White

White

Cork

Length, mm

19

22

23

18

Color

Ventilation, %

1.98

2.04

2.03

2.10

Filler

7.9

8.0

8.6

7.8

Total alkaloids, % (DWB)

22

24

9

11

Total red. sugars, % (DWB)

None

None

13

10

Reconstituted Tob., %

15

15

13

12

Expanded Stems, %

Floated Material, %

Wt. of tob., g (Corrected to 12.5% O.V.)

0.702

0.669

0.668

0.660

Rod Length, mm

58.7

56.8

58.9

58.9

Rod Density, g/cc

0.240

0.238

0.232

0.224

Menthol, mg/cigt.

0.24

0.50

0.33

0.37

Smoke

1.8

2.8

1.7

1.8

Filler

1.2

1.3

0.7

0.8

Filter

30

64

45

51

²Menthol, µg/puff

2050081980

LOW TAR 85 MM FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<i>PM6M</i> B & H Multifilter Menthol	<i>PA6MB</i> Players (Box)	<i>SL6M</i> Salem	<i>AL6M</i> Alpine
¹ Sales	0.01	0.15	2.84	0.05
<u>Smoke</u>				
FTC Tar, mg/cigt.	11.8	11.9	15.0	15.4
Nicotine, mg/cigt.	0.81	0.82	1.08	0.99
Puffs/cigt.	8.0	8.2	7.8	9.0
Filtration Eff., %	42	49	48	46
Filler Rod TPM, mg/cigt.	27.3	32.6	32.2	33.5
CO, mg/cigt.	8.4	11.2	17.8	13.9
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	3.6/91	4.2/107	5.2/132	4.7/119
Length, mm	84.3	83.1	83.6	83.8
Circumference, mm	25.1	25.0	25.0	25.0
<u>Paper</u>				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.9	0.7	1.6	0.6
Porosity, sec.	14	20	25	20
<u>Filter</u>				
Type	----	CA	CA	CA
Inner	C-CA	----	----	----
Outer	CA-PL	----	----	----
RTD, in./mm of H ₂ O	2.4/61	3.0/76	3.0/76	2.8/71
Length, mm	25.1	27.0	21.0	21.0
Weight, g	0.34	0.17	0.13	0.14
Fiber denier/shape	----	4.0/Y	2.7/Y	3.1/Y
Inner	3.3/I	----	----	----
Outer	3.1/Y	----	----	----
Tipping Paper				
Length, mm	30	32	25	26
Color	White	Cork	White	White
Ventilation, %	30	24	----	12
<u>Filler</u>				
Total alkaloids, % (DWB)	1.88	1.88	2.05	1.79
Total red. sugars, % (DWB)	6.7	6.7	7.4	5.5
Reconstituted Tob., %	21	20	24	22
Expanded Stems, %	2	2	None	2
Floated Material, %	15	11	15	13
Wt. of tob., g (Corrected to 12.5% O.V.)	0.684	0.693	0.743	0.758
Rod Length, mm	59.2	56.1	62.6	62.8
Rod Density, g/cc	0.231	0.248	0.237	0.242
<u>Menthol, mg/cigt.</u>				
Smoke	0.46	0.60	0.61	0.57
Filler	2.3	2.2	2.0	1.9
Filter	1.7	1.3	0.8	0.9
² Menthol, µg/puff	62	75	75	63

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by number of puffs.

2050081981

FULL FLAVORED 85 MM FILTER MENTHOL CIGARETTES

21

(16 MG TAR OR MORE)

(Brands ranked according to FTC Tar, left to right)

	<i>MR6M</i> Marlboro	<i>KL6M</i> Kool	<i>NW6M</i> Newport
¹ Sales	0.32	5.30	1.77
<u>Smoke</u>			
FTC Tar, mg/cigt.	15.5	15.6	17.0
Nicotine, mg/cigt.	1.02	1.02	1.34
Puffs/cigt.	8.9	7.2	8.5
Filtration Eff., %	48	41	45
Filler Rod TPM, mg/cigt.	33.3	29.6	32.3
CO, mg/cigt.	13.9	13.9	19.0
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	4.5/114	4.2/107	4.8/122
Length, mm	83.8	83.8	84.2
Circumference, mm	24.9	25.0	25.2
<u>Paper</u>			
Components			
Type	Cit.	Cit.	Cit.
Percent	0.6	0.2	0.7
Porosity, sec.	20	14	34
<u>Filter</u>			
Type	CA	CA	CA
Inner	----	----	----
Outer	----	----	----
RTD, in./mm of H ₂ O	2.8/71	2.1/53	2.5/64
Length, mm	21.0	20.9	21.1
Weight, g	0.13	0.12	0.12
Fiber denier/shape	3.2/Y	3.1/Y	3.0/Y
Inner	----	----	----
Outer	----	----	----
Tipping Paper			
Length, mm	25	26	25
Color	Cork	Cork	Cork
Ventilation, %	13	----	----
<u>Filler</u>			
Total alkaloids, % (DWB)	1.82	2.10	2.30
Total red. sugars, % (DWB)	6.2	7.6	8.7
Reconstituted Tob., %	24	11	21
Expanded Stems, %	2	14	None
Floated Material, %	12	12	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.753	0.706	0.725
Rod Length, mm	62.8	62.9	63.1
Rod Density, g/cc	0.241	0.224	0.228
<u>Menthol, mg/cigt.</u>			
Smoke	0.56	0.43	0.50
Filler	1.8	1.6	1.6
Filter	0.9	0.6	0.6
² Menthol, µg/puff	63	58	60

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by number of puffs.

100-120mm
PLAIN

2050081982

ULTRA LOW TAR 100 MM FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	CR8B Carlton (Box)	NO8 Now	MU8 Merit Ultra Lights	CB8 Cambridge	KT8 Kent III
¹ Sales	0.25	0.38	0.44	0.10	0.65
<u>Smoke</u>					
FTC Tar, mg/cigt.	0.8	3.5	4.2	4.4	4.6
Nicotine, mg/cigt.	0.10	0.35	0.37	0.38	0.48
Puffs/cigt.	8.2	8.1	9.1	8.2	8.4
Filtration Eff., %	73	66	66	67	66
Filler Rod TPM, mg/cigt.	22.9	27.0	27.5	26.2	28.0
CO, mg/cigt.	0.7	4.2	5.1	4.8	5.5
<u>Cigarette</u>					
Total RTD, in./mm of H ₂ O	3.1/79	4.3/109	4.5/114	5.0/127	4.3/109
Length, mm	98.6	98.8	99.2	99.1	98.6
Circumference, mm	24.5	24.9	24.8	24.8	25.0
<u>Paper</u>					
<u>Components</u>					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	0.8	1.6	(0.7)	1.7	1.6
Porosity, sec.	14	24	15	14	21
<u>Filter</u>					
Type	CA	CA	CA	CA	----
Inner	----	----	----	----	CA
Outer	----	----	----	----	CA
RTD, in./mm of H ₂ O	4.8/122	5.3/135	5.5/140	5.7/145	4.8/122
Length, mm	27.1	31.1	31.6	31.4	26.9
Weight, g	0.19	0.20	0.21	0.22	0.16
Fiber denier/shape	3.2/I	2.5/Y	2.8/Y	3.3/Y	----
Inner	----	----	----	----	1.8/Y
Outer	----	----	----	----	3.0/Y
<u>Tipping Paper</u>					
Length, mm	35	35	36	36	35
Color	White	White	Cork	White	White
Ventilation, %	85	66	58	53	56
<u>Filler</u>					
Total alkaloids, % (DWB)	2.04	2.41	1.98	2.19	2.56
Total red. sugars, % (DWB)	7.4	5.8	6.6	5.9	7.5
Reconstituted Tob., %	17	15	20	17	14
Expanded Stems, %	None	None	None	None	None
Floated Material, %	51	52	18	30	25
Wt. of tob., g (Corrected to 12.5% O.V.)	0.622	0.623	0.730	0.663	0.707
Rod Length, mm	71.5	67.7	67.6	67.7	71.7
Rod Density, g/cc	0.183	0.182	0.219	0.202	0.199

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

2050081983

ULTRA LOW TAR 100 MM FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

WU8 Winston Ultra Lights	CR8 Carlton	VU8 Vantage Ultra Lights	BU8B Benson & Hedges DeLuxe Ultra Lights (Box)	BY8 Barclay*	
0.39	0.80	0.52	0.92	0.34	¹ Sales
4.8	5.0	5.2	5.5	*	Smoke
0.41	0.42	0.45	0.41	*	FTC Tar, mg/cigt.
9.3	8.6	9.1	9.0	*	Nicotine, mg/cigt.
67	58	67	58	57	Puffs/cigt.
27.0	25.0	28.2	27.6	27.1	Filtration Eff., %
6.5	6.0	6.9	4.6	*	Filler Rod TPM, mg/cigt.
					CO, mg/cigt.
4.9/124	5.2/132	4.8/122	4.2/107	1.2/30	Cigarette
99.0	99.6	98.9	98.2	98.8	Total RTD, in./mm of H ₂ O
25.0	24.4	24.9	24.0	24.9	Length, mm
					Circumference, mm
					Paper
					Components
Cit.	Cit.	Cit.	Cit.	Cit.	Type
0.8	0.7	0.8	2.3	0.4	Percent
16	23	22	15	10	Porosity, sec.
					Filter
CA	CA	CA	CA	CA	Type
----	----	----	----	----	Inner
----	----	----	----	----	Outer
5.9/150	5.0/127	5.8/147	4.9/124	2.8/71	RTD, in./mm of H ₂ O
31.0	27.1	30.8	31.5	27.0	Length, mm
0.22	0.19	0.22	0.18	0.15	Weight, g
2.5/Y	3.4/I	2.3/Y	2.8/Y	3.7/Y	Fiber denier/shape
----	----	----	----	----	Inner
----	----	----	----	----	Outer
					Tipping Paper
35	32	35	36	36	Length, mm
Cork	White	White	White	Cork	Color
55	54	56	58	77	Ventilation, %
					Filler
1.97	2.10	2.03	1.84	1.99	Total alkaloids, % (DWB)
7.9	7.6	7.8	7.2	8.0	Total red. sugars, % (DWB)
23	17	22	21	7	Reconstituted Tob., %
None	None	None	2	8	Expanded Stems, %
25	51	26	19	26	Floated Material, %
					Wt. of tob., g (Corrected
0.724	0.638	0.726	0.710	0.747	to 12.5% O.V.)
68.0	72.5	68.1	66.7	71.8	Rod Length, mm
0.216	0.186	0.214	0.233	0.210	Rod Density, g/cc

*The FTC has determined that its present methodology does not accurately measure the tar, nicotine and CO deliveries of cigarettes incorporating a "Barclay-type" filter.

2050081984

LOW TAR 100 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<u>KG8</u> Kent Golden Lights	<u>VE8</u> Vantage	<u>TU8</u> True	<u>ME8</u> Merit	<u>RG8</u> Raleigh Lights
¹ Sales	0.57	0.94	0.46	1.56	0.19
<u>Smoke</u>					
FTC Tar, mg/cigt.	8.6	9.1	9.4	9.7	9.7
Nicotine, mg/cigt.	0.82	0.74	0.87	0.72	0.79
Puffs/cigt.	9.0	9.6	9.1	9.6	9.3
Filtration Eff., %	52	56	49	59	52
Filler Rod TPM, mg/cigt.	29.3	28.8	27.3	28.5	29.5
CO, mg/cigt.	9.2	10.2	7.2	12.0	9.5
<u>Cigarette</u>					
Total RTD, in./mm of H ₂ O	3.7/94	5.0/127	2.1/53	5.2/132	4.2/107
Length, mm	98.8	99.5	98.9	99.3	98.8
Circumference, mm	24.8	25.0	25.1	24.8	25.0
<u>Paper</u>					
Components					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	1.8	0.8	2.0	0.8	0.2
Porosity, sec.	22	16	22	13	14
<u>Filter</u>					
Type	CA	CA	----	CA	CA
Inner	----	----	CA	----	----
Outer	----	----	PL	----	----
RTD, in./mm of H ₂ O	3.2/81	4.8/122	2.9/74	4.3/109	3.4/86
Length, mm	27.0	27.5	27.1	31.5	27.0
Weight, g	0.15	0.29	0.17	0.18	0.15
Fiber denier/shape	3.2/Y	2.6/Y	----	2.6/Y	3.2/Y
Inner	----	----	1.8/Y	----	----
Outer	----	----	----	----	----
Tipping Paper					
Length, mm	35	34	32	36	36
Color	White	Cork	White	Cork	Cork
Ventilation, %	42	37	54	28	38
<u>Filler</u>					
Total alkaloids, % (DWB)	2.29	1.96	2.19	1.89	2.12
Total red. sugars, % (DWB)	9.1	8.8	6.0	6.2	8.4
Reconstituted Tob., %	19	22	20	22	12
Expanded Stems, %	None	None	None	2	12
Floated Material, %	12	21	12	12	11
Wt. of tob., g (Corrected to 12.5% O.V.)	0.792	0.833	0.789	0.808	0.827
Rod Length, mm	71.8	72.0	71.8	66.8	71.8
Rod Density, g/cc	0.224	0.237	0.221	0.243	0.243

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

2050081985

LOW TAR 100 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

BL8

PT8

SN8

CL8

WL8

B & H
LightsPall Mall
Light

Satin

Camel
LightsWinston
Lights

1.08

0.09

0.27

0.36

1.82

¹Sales9.8
0.71
9.9
58
29.5
11.810.0
0.80
9.1
55
28.4
11.710.2
0.93
8.9
52
28.1
11.210.8
0.81
9.4
61
28.8
13.411.1
0.88
9.6
61
30.2
14.8Smoke

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

Filler Rod TPM, mg/cigt.

CO, mg/cigt.

5.1/130
99.2
24.85.3/135
99.6
24.44.0/102
98.8
25.05.6/142
99.0
25.05.7/145
98.9
24.9CigaretteTotal RTD, in./mm of H₂O

Length, mm

Circumference, mm

Cit.
0.6
14Cit.
0.8
13Cit.
1.7
22Cit.
0.7
16Cit.
0.8
15Paper

Components

Type

Percent

Porosity, sec.

CA

CA

CA

CA

CA

----4.4/112
31.5
0.19
2.6/Y4.1/104
27.0
0.17
3.4/Y3.4/86
26.9
0.16
2.6/Y4.6/117
30.8
0.20
2.6/Y4.7/119
31.0
0.19
2.7/YFilter

Type

Inner

Outer

RTD, in./mm of H₂O

Length, mm

Weight, g

Fiber denier/shape

Inner

Outer

Tipping Paper

Length, mm

Color

Ventilation, %

36
White
3335
White
2632
White
3835
Cork
2335
Cork
171.89
7.3
21
2
122.02
9.1
15
3
152.30
7.8
19
None
121.83
7.9
24
None
151.90
7.9
23
None
16Filler

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Floated Material, %

Wt. of tob., g (Corrected
to 12.5% O.V.)

Rod Length, mm

Rod Density, g/cc

0.802
67.7
0.2450.814
72.6
0.2380.803
71.9
0.2260.812
68.2
0.2410.813
67.9
0.243

2050081986

LOW TAR 100 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<i>ML8</i> Marlboro Lights	<i>ML8B</i> Marlboro Lights (Box)	<i>VL8</i> Viceroy Rich Lights	<i>SE8B</i> Sterling Special Blend (Box)	<i>LM8</i> L & M
¹ Sales	2.27	0.41	0.12	----	0.15
<u>Smoke</u>					
FTC Tar, mg/cigt.	11.2	11.3	11.5	11.5	12.9
Nicotine, mg/cigt.	0.80	0.81	0.86	0.92	0.94
Puffs/cigt.	10.2	10.1	8.7	10.0	8.0
Filtration Eff., %	58	59	53	53	47
Filler Rod TPM, mg/cigt.	29.8	29.9	28.6	32.3	25.1
CO, mg/cigt.	12.8	11.8	11.2	10.8	12.9
<u>Cigarette</u>					
Total RTD, in./mm of H ₂ O	5.4/137	5.5/140	5.0/127	5.0/127	5.0/127
Length, mm	99.3	98.4	99.0	93.9	98.6
Circumference, mm	24.8	24.8	24.9	24.9	24.8
<u>Paper</u>					
Components					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	0.6	0.6	0.2	0.4	1.1
Porosity, sec.	19	21	14	16	7*
<u>Filter</u>					
Type	CA	CA	CA	CA	CA
Inner	----	----	----	----	----
Outer	----	----	----	----	----
RTD, in./mm of H ₂ O	4.3/109	4.3/109	3.4/86	4.0/102	2.8/71
Length, mm	31.5	31.5	26.8	27.1	29.9
Weight, g	0.19	0.19	0.16	0.18	0.17
Fiber denier/shape	2.8/Y	3.0/Y	3.0/Y	3.6/Y	3.6/Y
Inner	----	----	----	----	----
Outer	----	----	----	----	----
Tipping Paper					
Length, mm	36	36	36	31	35
Color	White	White	Cork	Cork	White
Ventilation, %	28	24	20	32	----
<u>Filler</u>					
Total alkaloids, % (DWB)	1.85	1.89	2.08	1.88	1.84
Total red. sugars, % (DWB)	7.2	7.1	8.1	6.4	10.2
Reconstituted Tob., %	20	20	11	25	9
Expanded Stems, %	2	2	11	None	7
Floated Material, %	12	12	11	14	26
Wt. of tob., g (Corrected to 12.5% O.V.)	0.809	0.804	0.827	0.841	0.696
Rod Length, mm	67.8	66.9	72.2	66.8	68.7
Rod Density, g/cc	0.244	0.247	0.234	0.258	0.209

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

*These cigarette papers are mechanically perforated.

2050081987

LOW TAR 100 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

✓
PA8B✓
KN8✓
VC8

PL8

Players
(Box)KentViceroyPall
Mall

0.12

0.67

0.31

1.00

1Sales

13.2

13.7

14.8

15.1

Smoke

0.88

1.14

1.03

1.15

FTC Tar, mg/cigt.

8.9

9.8

9.0

9.1

Nicotine, mg/cigt.

48

40

47

45

Puffs/cigt.

28.4

29.0

28.0

26.7

Filtration Eff., %

12.8

11.5

14.1

15.6

Filler Rod TPM, mg/cigt.

CO, mg/cigt.

4.7/119

3.2/81

4.8/122

5.0/127

Cigarette

98.5

98.8

98.8

99.7

Total RTD, in./mm of H₂O

24.0

24.9

25.0

24.4

Length, mm

Circumference, mm

Cit.

Cit.

Cit.

Cit.

Paper

2.1

0.6

0.2

0.8

Components

15

21

14

13

Type

Percent

Porosity, sec.

CA

CA

CA

CA

Filter

Type

Inner

3.1/79

2.2/56

2.5/64

2.7/68

Outer

31.6

27.0

26.8

26.8

RTD, in./mm of H₂O

0.18

0.16

0.16

0.16

Length, mm

4.6/Y

4.6/Y

4.1/Y

4.2/Y

Weight, g

Fiber denier/shape

Inner

Outer

36

32

32

32

Tipping Paper

Cork

White

Cork

White

Length, mm

21

30

11

Color

Ventilation, %

1.93

2.04

1.97

2.14

Filler

7.2

8.5

8.3

9.6

Total alkaloids, % (DWB)

20

19

11

18

Total red. sugars, % (DWB)

2

None

11

3

Reconstituted Tob., %

11

12

11

9

Expanded Stems, %

Floated Material, %

Wt. of tob., g (Corrected

to 12.5% O.V.)

0.747

0.799

0.841

0.843

Rod Length, mm

66.9

71.8

72.0

72.9

Rod Density, g/cc

0.244

0.227

0.233

0.246

FULL FLAVORED 100 MM FILTER CIGARETTES(16 MG TAR OR MORE)

(Brands ranked according to FTC Tar, left to right)

	<u>RL8</u>	<u>WN8</u>	<u>MR8</u>	<u>BH8</u>
	<u>Raleigh</u>	<u>Winston</u>	<u>Marlboro</u>	<u>B & H</u>
¹ Sales	0.51	2.43	2.72	1.71
<u>Smoke</u>				
FTC Tar, mg/cigt.	15.0	16.0	16.2	16.4
Nicotine, mg/cigt.	1.04	1.24	1.10	1.09
Puffs/cigt.	8.5	10.2	10.4	10.3
Filtration Eff., %	48	48	49	48
Filler Rod TPM, mg/cigt.	27.3	31.3	29.4	30.2
CO, mg/cigt.	16.1	17.0	15.9	16.7
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	4.6/117	4.6/117	4.9/124	5.1/130
Length, mm	98.8	99.3	99.4	99.4
Circumference, mm	25.0	25.0	24.9	24.8
<u>Paper</u>				
<u>Components</u>				
Type	Cit.	Cit.	Cit.	Cit.
Percent	0.2	1.4	0.6	0.7
Porosity, sec.	14	24	18	16
<u>Filter</u>				
Type	CA	CA	CA	CA
Inner	----	----	----	----
Outer	----	----	----	----
RTD, in./mm of H ₂ O	2.5/64	3.0/76	3.0/76	3.0/76
Length, mm	27.0	27.3	27.5	27.5
Weight, g	0.16	0.17	0.17	0.17
Fiber denier/shape	3.8/Y	3.8/Y	3.7/Y	3.7/Y
Inner	----	----	----	----
Outer	----	----	----	----
<u>Tipping Paper</u>				
Length, mm	32	(32)	31.5	32
Color	Cork	Cork	Cork	White
Ventilation, %	----	19	15	14
<u>Filler</u>				
Total alkaloids, % (DWB)	1.98	2.01	1.92	1.85
Total red. sugars, % (DWB)	7.7	8.7	7.0	6.9
Reconstituted Tob., %	12	23	20	21
Expanded Stems, %	12	None	2	2
Floated Material, %	4	16	12	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.837	0.878	0.862	0.860
Rod Length, mm	71.8	72.0	71.9	71.9
Rod Density, g/cc	0.234	0.247	0.245	0.244

205081989

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

(Brands ranked according to FTC Tar, left to right)

	<u>CR9</u> Carlton	<u>SR9B</u> Saratoga (Box)	<u>MO9</u> More
¹ Sales	0.27	0.32	0.78
<u>Smoke</u>			
FTC Tar, mg/cigt.	7.2	13.7	17.3
Nicotine, mg/cigt.	0.65	0.94	1.32
Puffs/cigt.	10.2	12.4	12.8
Filtration Eff., %	45	49	48
Filler Rod TPM, mg/cigt.	22.7	26.6	35.3
CO, mg/cigt.	4.7	13.6	21.6
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	3.8/96	6.4/163	7.2/183
Length, mm	119.6	119.7	119.7
Circumference, mm	22.3	22.0	21.1
<u>Paper</u>			
Components			
Type	Cit.	Cit.	Cit.
Percent	0.9	0.8	1.5
Color	White	White	Brown
Porosity, sec.	14	17	40
<u>Filter</u>			
Type	CA	CA	CA
RTD, in./mm of H ₂ O	3.5/89	4.6/117	4.9/124
Length, mm	29.9	30.0	35.0
Weight, g	0.14	0.15	0.16
Fiber denier/shape	4.8/Y	3.2/Y	4.8/Y
Tipping Paper			
Length, mm	35	35	39
Color	White	Cork	Brown
Ventilation, %	60	29	30
<u>Filler</u>			
Total alkaloids, % (DWB)	2.18	1.85	1.98
Total red. sugars, % (DWB)	7.5	5.8	7.4
Reconstituted Tob., %	17	22	23
Expanded Stems, %	None	2	None
Floated Material, %	38	12	17
Wt. of tob., g (Corrected to 12.5% O.V.)	0.742	0.853	0.760
Rod Length, mm	89.7	89.7	84.7
Rod Density, g/cc	0.208	0.249	0.254

¹Estimated domestic sales in billions of cigarettes for first quarter-
Maxwell Report - April, 1984.

100 - 120mm
MENTHOL

2050081990

ULTRA LOW TAR 100 MM FILTER MENTHOL CIGARETTES

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<i>NO8M</i>	<i>MU8M</i> Merit Ultra Lights	<i>VU8M</i> Vantage Ultra Lights	<i>BH8MB</i> Benson & Hedges DeLuxe Ultra Lights (Box)
¹ Sales	0.23	0.14	0.06	0.60
Smoke				
FTC Tar, mg/cigt.	3.2	4.3	5.3	5.5
Nicotine, mg/cigt.	0.28	0.34	0.46	0.41
Puffs/cigt.	8.2	9.0	9.2	9.2
Filtration Eff., %	66	66	63	59
Filler Rod TPM, mg/cigt.	26.6	26.2	28.7	28.0
CO, mg/cigt.	3.4	4.6	5.7	5.6
Cigarette				
Total RTD, in./mm of H ₂ O	4.0/102	4.4/112	4.5/114	4.2/107
Length, mm	99.1	99.4	99.3	98.2
Circumference, mm	24.9	24.8	24.9	24.1
Paper				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	1.8	1.8	0.9	2.5
Porosity, sec.	25	14	16	14
Filter				
Type	CA	CA	CA	CA
Inner	----	----	----	----
Outer	----	----	----	----
RTD, in./mm of H ₂ O	5.3/135	5.5/140	5.3/135	4.8/122
Length, mm	31.0	31.6	27.4	31.5
Weight, g	0.21	0.22	0.20	0.18
Fiber denier/shape	2.9/Y	3.0/Y	2.5/Y	3.1/Y
Inner	----	----	----	----
Outer	----	----	----	----
Tipping Paper				
Length, mm	35	36	34	36
Color	White	Cork	White	White
Ventilation, %	70	58	60	56
Filler				
Total alkaloids, % (DWB)	2.34	1.95	2.03	1.84
Total red. sugars, % (DWB)	6.3	5.4	7.1	6.3
Reconstituted Tob., %	15	20	22	21
Expanded Stems, %	None	None	None	2
Floated Material, %	52	18	37	19
Wt. of tob., g (Corrected to 12.5% O.V.)	0.626	0.721	0.727	0.715
Rod Length, mm	68.1	67.8	71.9	66.7
Rod Density, g/cc	0.185	0.216	0.205	0.234
Menthol, mg/cigt.				
Smoke	0.39	0.36	0.40	0.43
Filler	5.8	3.7	4.2	3.4
Filter	3.3	2.2	1.8	1.9
² Menthol, µg/puff	45	40	43	47

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by number of puffs.

2050081991

ULTRA LOW TAR 100 MM FILTER MENTHOL CIGARETTES

31

(6 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

<u>SU8M</u> Salem Ultra Lights	<u>BY8M</u> Barclay*	<u>KU8M</u> Kool Ultra*	
0.48	0.08	0.17	¹ Sales
5.7	*	*	Smoke
0.48	*	*	FTC Tar, mg/cigt.
9.7	*	*	Nicotine, mg/cigt.
66	55	54	Puffs/cigt.
31.1	28.1	30.8	Filtration Eff., %
7.4	*	*	Filler Rod TPM, mg/cigt.
			CO, mg/cigt.
4.8/122	1.2/30	1.5/38	Cigarette
99.1	99.0	98.8	Total RTD, in./mm of H ₂ O
24.8	24.8	24.9	Length, mm
			Circumference, mm
Cit.	Cit.	Cit.	Paper
1.6	0.4	0.9	Components
25	10	14	Type
			Percent
			Porosity, sec.
CA	CA	CA	Filter
----	----	----	Type
----	----	----	Inner
5.9/150	2.8/71	2.8/71	Outer
31.1	27.1	27.0	RTD, in./mm of H ₂ O
0.22	0.14	0.16	Length, mm
2.5/Y	4.0/Y	4.0/Y	Weight, g
----	----	----	Fiber denier/shape
----	----	----	Inner
			Outer
35	36	36	Tipping Paper
White	Cork	Cork	Length, mm
56	77	71	Color
			Ventilation, %
2.02	2.06	2.33	Filler
8.0	7.7	7.1	Total alkaloids, % (DWB)
24	7	10	Total red. sugars, % (DWB)
None	8	9	Reconstituted Tob., %
17	8	9	Expanded Stems, %
			Floated Material, %
0.782	0.763	0.774	Wt. of tob., g (Corrected
68.0	71.9	71.8	to 12.5% O.V.)
0.234	0.216	0.218	Rod Length, mm
			Rod Density, g/cc
0.36	0.14	0.23	Menthol, mg/cigt.
4.6	3.5	3.2	Smoke
1.1	1.3	1.4	Filler
			Filter
37	15	25	² Menthol, µg/puff

*The FTC has determined that its present methodology does not accurately measure the tar, nicotine and CO deliveries of cigarettes incorporating a "Barclay-type" filter.

LOW TAR 100 MM FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	BT8M	BA8M	NG8M	KG8M
	Bright	Belair	Newport Lights	Kent Golden Lights
¹ Sales	0.25	0.51	0.07	0.10
Smoke				
FTC Tar, mg/cigt.	6.8	7.5	8.4	8.5
Nicotine, mg/cigt.	0.60	0.58	0.78	0.78
Puffs/cigt.	9.1	8.9	8.8	8.8
Filtration Eff., %	60	47	53	53
Filler Rod TPM, mg/cigt.	31.2	27.0	28.9	28.6
CO, mg/cigt.	8.3	6.5	7.6	7.1
Cigarette				
Total RTD, in./mm of H ₂ O	5.0/127	3.9/99	3.8/96	3.8/96
Length, mm	99.1	98.8	98.8	99.0
Circumference, mm	24.8	25.0	24.9	24.8
Paper				
Components				
Type	Cit.	Cit.	Cit.	Cit.
Percent	1.4	0.2	1.7	1.6
Porosity, sec.	22	15	22	23
Filter				
Type	CA	CA	CA	CA
Inner	----	----	----	----
Outer	----	----	----	----
RTD, in./mm of H ₂ O	4.7/119	3.0/76	3.4/86	3.4/86
Length, mm	27.4	27.0	26.9	27.0
Weight, g	0.18	0.17	0.16	0.16
Fiber denier/shape	2.4/Y	3.6/Y	2.8/Y	3.0/Y
Inner	----	----	----	----
Outer	----	----	----	----
Tipping paper				
Length, mm	36	36	35	35
Color	White	White	Cork	White
Ventilation, %	46	46	45	42
Filler				
Total alkaloids, % (DWB)	1.99	1.88	2.29	2.29
Total red. sugars, % (DWB)	6.8	7.5	8.2	8.4
Reconstituted Tob., %	22	9	21	19
Expanded Stems, %	None	14	None	None
Floated Material, %	30	13	12	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.780	0.819	0.792	0.788
Rod Length, mm	71.7	71.8	71.9	72.0
Rod Density, g/cc	0.222	0.229	0.224	0.222
Menthol, mg/cigt.				
Smoke	0.51	0.33	0.37	0.38
Filler	3.9	2.5	2.4	2.6
Filter	1.8	0.9	1.0	1.0
² Menthol, µg/puff	54	36	42	43

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by number of puffs.

2050081993

LOW TAR 100 MM FILTER MENTHOL CIGARETTES

33

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

TU8M

SG8M

ME8M

K8M

True Salem Lights Merit Lights

0.24 2.00 0.30 0.25

9.5 9.6 9.7 9.7
0.91 0.79 0.69 0.77
9.2 9.7 10.0 9.0
52 (62) 58 49
29.7 30.7 29.6 30.2
6.9 12.2 10.5 9.6

2.0/51 (5.4/137) 4.8/122 4.2/107
99.1 99.2 99.4 98.9
25.0 24.9 24.8 24.8

Cit. Cit. Cit. Cit.
1.7 0.8 0.8 0.2
22 16 15 15

CA CA CA CA
PL PL PL PL
2.9/74 (4.8/122) 4.1/104 3.1/79
26.9 (31.1) 31.4 26.9
0.17 (0.19) 0.19 0.16
1.7/Y 2.4/Y 3.2/Y 3.2/Y

32 35 36 36
White White Cork Cork
56 30 34 37

2.22 2.00 1.78 2.08
6.4 8.5 5.3 8.1
20 24 22 11
None None 2 10
12 15 12 12

0.788 (0.803) 0.801 0.802
72.2 (68.1) 68.0 72.0
0.220 (0.241) 0.244 0.226

0.44 (0.45) 0.61 0.33
2.8 (2.9) 3.4 2.2
1.0 1.2 1.8 1.0

48 (46) 60 37

¹Sales

Smoke

FTC Tar, mg/cigt.
Nicotine, mg/cigt.
Puffs/cigt.
Filtration Eff., %
Filler Rod TPM, mg/cigt.
CO, mg/cigt.

Cigarette

Total RTD, in./mm of H₂O
Length, mm
Circumference, mm

Paper

Components
Type
Percent
Porosity, sec.

Filter

Type
Inner
Outer
RTD, in./mm of H₂O
Length, mm
Weight, g
Fiber denier/shape
Inner
Outer
Tipping Paper
Length, mm
Color
Ventilation, %

Filler

Total alkaloids, % (DWB)
Total red. sugars, % (DWB)
Reconstituted Tob., %
Expanded Stems, %
Floated Material, %
Wt. of tob., g (Corrected to 12.5% O.V.)
Rod Length, mm
Rod Density, g/cc

Menthol, mg/cigt.

Smoke
Filler
Filter

²Menthol, µg/puff

205081994

LOW TAR 100 MM FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)

(Brands ranked according to FTC Tar, left to right)

	<u>SN8M</u>	<u>BL8M</u> B & H Lights	<u>VE8M</u> Vantage
¹ Sales	0.17	0.93	0.08
<u>Smoke</u>			
FTC Tar, mg/cigt.	9.8	9.9	10.0
Nicotine, mg/cigt.	0.88	0.71	0.82
Puffs/cigt.	8.9	10.2	10.2
Filtration Eff., %	52	57	59
Filler Rod TPM, mg/cigt.	29.7	30.8	30.4
CO, mg/cigt.	11.0	11.0	11.0
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	4.0/102	4.7/119	4.9/124
Length, mm	98.8	99.4	99.2
Circumference, mm	25.0	24.8	25.0
<u>Paper</u>			
Components			
Type	Cit.	Cit.	Cit.
Percent	2.0	0.8	0.9
Porosity, sec.	23	15	17
<u>Filter</u>			
Type	CA	CA	CA
Inner	----	----	----
Outer	----	----	----
RTD, in./mm of H ₂ O	3.5/89	4.2/107	4.8/122
Length, mm	27.0	31.4	27.5
Weight, g	0.16	0.19	0.31
Fiber denier/shape	2.6/Y	2.6/Y	2.4/Y
Inner	----	----	----
Outer	----	----	----
Tipping Paper			
Length, mm	32	36	34
Color	White	White	Cork
Ventilation, %	35	36	37
<u>Filler</u>			
Total alkaloids, % (DWB)	2.16	1.78	1.95
Total red. sugars, % (DWB)	8.3	5.8	7.6
Reconstituted Tob., %	19	21	22
Expanded Stems, %	None	2	None
Floated Material, %	12	12	15
Wt. of tob., g (Corrected to 12.5% O.V.)	0.798	0.803	0.839
Rod Length, mm	71.8	68.0	71.7
Rod Density, g/cc	0.224	0.244	0.238
<u>Menthol, mg/cigt.</u>			
Smoke	0.37	0.66	0.49
Filler	2.2	3.6	4.0
Filter	0.9	1.8	1.9
² Menthol, µg/puff	41	65	47

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms)
by number of puffs.

2050081995

✓ LOW TAR 100 MM FILTER MENTHOL CIGARETTES

✓ (15 MG TAR OR LESS)

✓ **SE8MB**

Sterling
Special
Blend (Box)

(Brands ranked according to FTC Tar, left to right)

KL8M

Kool

PA8MB
Players
(Box)

11.5
0.87
10.2
54
33.6
10.3

4.8/122
93.9
24.8

Cit.
0.4
16

CA

4.0/102
27.0
0.18
3.6/Y

31
Cork
36

1.83
7.3
25
None
14

0.831
66.9
0.254

0.85
4.7
1.7

79

1.80

13.4
0.90
8.0
50
24.3
16.1

5.0/127
98.9
25.0

Cit.
0.6
15

CA

2.4/61
27.0
0.16
3.8/Y

32
Cork

2.02
7.7
11
14
12

0.801
71.9
0.223

0.38
2.0
0.8

47

0.08

13.7
0.94
9.1
47
28.9
12.8

4.6/117
98.4
24.1

Cit.
1.9
14

CA

3.1/79
31.5
0.18
4.5/Y

36
Cork
21

1.89
5.5
20
2
11

0.755
66.9
0.246

0.62
2.6
1.2

69

¹Sales

Smoke

FTC Tar, mg/cigt.
Nicotine, mg/cigt.
Puffs/cigt.
Filtration Eff., %
Filler Rod TPM, mg/cigt.
CO, mg/cigt.

Cigarette

Total RTD, in./mm of H₂O
Length, mm
Circumference, mm

Paper

Components
Type
Percent
Porosity, sec.

Filter

Type
Inner
Outer
RTD, in./mm of H₂O
Length, mm
Weight, g
Fiber denier/shape
Inner
Outer
Tipping Paper
Length, mm
Color
Ventilation, %

Filler

Total alkaloids, % (DWB)
Total red. sugars, % (DWB)
Reconstituted Tob., %
Expanded Stems, %
Floated Material, %
Wt. of tob., g (Corrected
to 12.5% O.V.)
Rod Length, mm
Rod Density, g/cc

Menthol, mg/cigt.

Smoke
Filler
Filter

²Menthol, µg/puff

2050081996

FULL FLAVORED 100 MM FILTER MENTHOL CIGARETTES

(16 MG TAR OR MORE)

(Brands ranked according to FTC Tar, left to right)

	BH8M	SL8M	NW8M
	<u>B & H</u>	<u>Salem</u>	<u>Newport</u>
¹ Sales	1.57	1.77	0.53
<u>Smoke</u>			
FTC Tar, mg/cigt.	16.1	16.1	19.1
Nicotine, mg/cigt.	1.09	1.26	1.54
Puffs/cigt.	10.4	10.4	9.3
Filtration Eff., %	48	46	43
Filler Rod TPM, mg/cigt.	29.8	31.7	31.6
CO, mg/cigt.	15.9	15.0	20.0
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	5.0/127	4.4/112	4.2/107
Length, mm	99.5	99.4	99.0
Circumference, mm	24.8	24.9	25.0
<u>Paper</u>			
Components			
Type	Cit.	Cit.	Cit.
Percent	0.8	0.8	0.7
Porosity, sec.	15	14	36
<u>Filter</u>			
Type	CA	CA	CA
Inner	----	----	----
Outer	----	----	----
RTD, in./mm of H ₂ O	3.0/76	2.8/71	2.1/53
Length, mm	27.4	27.4	26.9
Weight, g	0.17	0.16	0.15
Fiber denier/shape	3.7/Y	3.5/Y	4.6/Y
Inner	----	----	----
Outer	----	----	----
Tipping Paper			
Length, mm	32	31	32
Color	White	White	Cork
Ventilation, %	16	17	----
<u>Filler</u>			
Total alkaloids, % (DWB)	1.88	2.06	2.25
Total red. sugars, % (DWB)	7.0	7.4	8.4
Reconstituted Tob., %	21	24	21
Expanded Stems, %	2	None	None
Floated Material, %	12	15	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.855	0.869	0.803
Rod Length, mm	72.1	72.0	72.1
Rod Density, g/cc	0.246	0.244	0.226
<u>Menthol, mg/cigt.</u>			
Smoke	0.68	0.62	0.53
Filler	2.6	2.7	1.8
Filter	1.0	0.8	0.7
² Menthol, μ g/puff	66	58	56

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by number of puffs.

2050081997

120 MM FILTER MENTHOL CIGARETTES

37 ✓

(Brands ranked according to FTC Tar, left to right)

	<i>CR9M</i> Carlton	<i>SR9MB</i> Saratoga (Box)	<i>MO9M</i> More
¹ Sales	0.27	0.14	0.64
<u>Smoke</u>			
FTC Tar, mg/cigt.	6.6	13.3	16.3
Nicotine, mg/cigt.	0.60	0.94	1.33
Puffs/cigt.	10.5	12.6	13.3
Filtration Eff., %	42	50	48
Filler Rod TPM, mg/cigt.	23.2	27.6	35.1
CO, mg/cigt.	5.2	14.0	20.2
<u>Cigarette</u>			
Total RTD, in./mm of H ₂ O	4.0/102	6.6/168	6.7/170
Length, mm	119.8	119.9	119.8
Circumference, mm	22.2	22.1	21.2
<u>Paper</u>			
<u>Components</u>			
Type	Cit.	Cit.	Cit.
Percent	0.9	0.8	1.5
Color	White	White	Brown
Porosity, sec.	14	18	41
<u>Filter</u>			
Type	CA	CA	CA
RTD, in./mm of H ₂ O	3.5/89	4.6/117	4.7/119
Length, mm	30.0	30.0	35.0
Weight, g	0.15	0.14	0.16
Fiber denier/shape	4.8/Y	3.0/Y	4.9/Y
Tipping Paper			
Length, mm	35	35	39
Color	White	Cork	Brown
Ventilation, %	60	30	35
<u>Filler</u>			
Total alkaloids, % (DWB)	2.20	1.83	2.14
Total red. sugars, % (DWB)	7.5	6.2	7.9
Reconstituted Tob., %	17	22	23
Expanded Stems, %	None	2	None
Floated Material, %	38	12	17
Wt. of tob., g (Corrected to 12.5% O.V.)	0.734	0.858	0.754
Rod Length, mm	89.8	89.9	84.8
Rod Density, g/cc	0.210	0.250	0.256
<u>Menthol, mg/cigt.</u>			
Smoke	0.53	0.63	0.70
Filler	4.4	2.9	3.0
Filter	1.2	1.4	0.7
² Menthol, µg/puff	50	51	52

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by number of puffs.

100mm
SLIM

2050081998

100 MM FILTER SLIM CIGARETTES

(Brands ranked according to FTC Tar, left to right)

	MG8B More Lights (Box)	VG8B Virginia Slims Lights (Box)	ST8 Silva Thins	VAB Virginia Slims
¹ Sales	0.22	0.85	0.10	0.91
<u>Smoke</u>				
FTC Tar, mg/cigt.	8.7	8.8	11.6	14.7
Nicotine, mg/cigt.	0.76	0.66	0.97	0.96
Puffs/cigt.	9.3	9.4	9.7	9.8
Filtration Eff., %	51	53	41	43
Filler Rod TPM, mg/cigt.	26.6	26.6	23.5	26.8
CO, mg/cigt.	9.3	9.2	9.6	13.0
<u>Cigarette</u>				
Total RTD, in./mm of H ₂ O	4.1/104	4.8/122	5.4/137	5.2/132
Length, mm	97.6	98.4	99.2	99.5
Circumference, mm	22.7	23.0	22.3	23.0
<u>Paper</u>				
<u>Components</u>				
Type	Cit.	Cit.	Cit.	Cit.
Percent	1.0	0.8	0.8	0.7
Porosity, sec.	16	14	13	15
<u>Filter</u>				
Type	CA	CA	CA	CA
RTD, in./mm of H ₂ O	3.9/99	4.4/112	3.4/86	3.1/79
Length, mm	31.0	31.5	26.8	27.4
Weight, g	0.15	0.16	0.14	0.13
Fiber denier/shape	3.5/Y	3.2/Y	4.8/Y	3.6/Y
<u>Tipping Paper</u>				
Length, mm	35	36	32	32
Color	Beige	White	White	White
Ventilation, %	49	42	24	17
<u>Filler</u>				
Total alkaloids, % (DWB)	1.98	1.87	2.17	1.84
Total red. sugars, % (DWB)	6.6	6.2	9.3	6.4
Reconstituted Tob., %	23	20	12	20
Expanded Stems, %	None	2	10	2
Floated Material, %	17	12	11	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.678	0.690	0.712	0.735
Rod Length, mm	66.6	66.9	72.4	72.1
Rod Density, g/cc	0.251	0.247	0.250	0.242

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

2050081999

100 MM FILTER SLIM MENTHOL CIGARETTES

(Brands ranked according to FTC Tar, left to right)

	MG8MB More Lights (Box)	SS8MB Salem Slim Lights (Box)	VG8MB Virginia Slims Lights (Box)	ST8M Silva Thins	VA8M Virginia Slims
¹ Sales	0.15	0.41	1.00	0.02	0.78
<u>Smoke</u>					
FTC Tar, mg/cigt.	8.3	8.4	9.3	10.8	14.3
Nicotine, mg/cigt.	0.71	0.71	0.65	0.91	0.96
Puffs/cigt.	8.0	8.8	9.4	9.7	9.6
Filtration Eff., %	50	50	52	41	43
Filler Rod TPM, mg/cigt.	24.6	26.2	27.0	25.2	27.0
CO, mg/cigt.	8.7	9.2	8.8	8.5	13.7
<u>Cigarette</u>					
Total RTD, in./mm of H ₂ O	4.6/117	4.6/117	5.0/127	5.0/127	4.8/122
Length, mm	97.8	97.7	98.4	99.3	99.3
Circumference, mm	22.6	22.7	23.0	22.2	23.0
<u>Paper</u>					
Components					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	1.3	0.9	0.8	0.9	0.8
Porosity, sec.	15	16	14	14	14
<u>Filter</u>					
Type	CA	CA	CA	CA	CA
RTD, in./mm of H ₂ O	4.0/102	4.0/102	4.3/109	3.4/86	2.8/71
Length, mm	31.1	31.1	31.6	26.9	27.5
Weight, g	0.15	0.15	0.16	0.14	0.13
Fiber denier/shape	3.1/Y	3.4/Y	3.2/Y	4.7/Y	3.6/Y
Tipping Paper					
Length, mm	35	35	36	32	32
Color	Beige	White	White	White	White
Ventilation, %	42	46	39	35	19
<u>Filler</u>					
Total alkaloids, % (DWB)	2.12	2.08	1.83	2.11	1.82
Total red. sugars, % (DWB)	6.6	7.9	6.1	7.2	6.5
Reconstituted Tob., %	23	24	20	17	20
Expanded Stems, %	None	None	2	3	2
Floated Material, %	28	26	12	11	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.603✓	0.643	0.697	0.719	0.735
Rod Length, mm	66.7	66.6	66.8	72.4	71.8
Rod Density, g/cc	0.222	0.236	0.250	0.252	0.246
<u>Menthol, mg/cigt.</u>					
Smoke	0.56	0.48	0.63	0.44	0.65
Filler	3.3	2.7	3.2	2.3	2.4
Filter	1.4	1.0	1.8	0.8	1.0
² Menthol, ug/puff	69	54	67	44	68

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

²These values were calculated by dividing the total deliveries (in micrograms) by number of puffs.

CHARCOAL

2050082000

85 MM CHARCOAL FILTER CIGARETTES

(Brands ranked according to FTC Tar, left to right)

	TG6 Tareyton Lights	LG6 Lark Lights	PM6 B & H Multifilter	TR6 Tareyton	LR6 Lark
¹ Sales	0.10	0.15	0.09	0.70	0.10
Smoke					
FTC Tar, mg/cigt.	5.0	11.9	12.1	12.7	13.1
Nicotine, mg/cigt.	0.42	0.86	0.79	0.88	0.98
Puffs/cigt.	6.8	6.7	8.0	8.0	7.0
Filtration Eff., %	55	45	48	53	45
Filler Rod TPM, mg/cigt.	24.2	26.3	29.5	27.8	27.1
Gas Phase Smoke Index, % Reduction	62	31	50	26	36
CO, mg/cigt.	4.2	12.9	11.5	15.2	13.2
Cigarette					
Total RTD, in./mm of H ₂ O	3.3/84	4.4/112	3.6/91	4.8/122	4.6/117
Length, mm	84.2	84.6	84.2	84.6	84.5
Circumference, mm	25.0	24.7	25.0	25.0	24.7
Paper					
Components					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	0.8	2.5	0.9	0.8	0.9
Porosity, sec.	14	8**	14	14	14
Filter					
Type	----	-----*	----	----	-----*
Inner	C In Paper	CA	C-CA	C In Paper	CA
Outer	CA	CA	CA-PL	CA	CA
RTD, in./mm of H ₂ O	3.0/76	2.7/68	2.8/71	2.5/64	2.6/66
Length, mm	27.0	24.8	25.1	20.0	24.9
Weight, g	0.20	0.19	0.35	0.17	0.19
Fiber denier/shape	----	----	----	----	----
Inner	----	3.6/Y	3.4/I	----	3.7/Y
Outer	3.0/Y	3.8/Y	3.2/Y	4.2/Y	3.9/Y
Carbon, mg/plug	7	66	42	32	66
Tipping Paper					
Length, mm	32	30	30	24	30
Color	Cork	Cork	White	Cork	Cork
Ventilation, %	52	----	24	----	----
Filler					
Total alkaloids, % (DWB)	2.02	1.86	1.79	2.08	1.87
Total red. sugars, % (DWB)	8.4	11.6	5.1	9.2	11.2
Reconstituted Tob., %	17	14	21	17	14
Expanded Stems, %	3	7	2	3	7
Floated Material, %	39	18	15	16	18
Wt. of tob., g (Corrected to 12.5% O.V.)	0.579	0.646	0.691	0.753	0.651
Rod Length, mm	57.2	59.8	59.1	64.6	59.6
Rod Density, g/cc	0.202	0.224	0.235	0.234	0.225

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

*Space containing carbon granules.

**These cigarette papers are mechanically perforated.

2050082001

100 MM CHARCOAL FILTER CIGARETTES

41

(Brands ranked according to FTC Tar, left to right)

	<u>TG8</u> Tareyton Long Lights	<u>PR8</u> Parliament Lights	<u>TR8</u> Tareyton	<u>LG8</u> Lark Lights	<u>LR8</u> Lark
¹ Sales	0.12	0.58	0.60	0.11	0.05
<u>Smoke</u>					
FTC Tar, mg/cigt.	8.2	11.0	12.2	12.4	14.3
Nicotine, mg/cigt.	0.72	0.82	0.94	0.92	1.00
Puffs/cigt.	9.8	9.5	8.8	8.1	8.4
Filtration Eff., %	57	54	55	48	48
Filler Rod TPM, mg/cigt.	27.6	29.6	25.8	25.0	30.6
Gas Phase Smoke Index, % Reduction	64	59	31	28	27
CO, mg/cigt.	7.1	12.6	15.4	13.9	15.3
<u>Cigarette</u>					
Total RTD, in./mm of H ₂ O	4.3/109	4.6/117	5.4/137	4.6/117	4.8/122
Length, mm	99.6	99.4	99.7	98.5	98.5
Circumference, mm	24.7	24.9	24.8	24.7	24.6
<u>Paper</u>					
Components					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	0.9	1.8	0.8	2.6	0.7
Porosity, sec.	14	14	12	7**	13
<u>Filter</u>					
Type	-----	-----	-----	-----*	-----*
Inner	C In Paper	C-CA	C In Paper	CA	CA
Outer	CA	CA	CA	CA	CA
RTD, in./mm of H ₂ O	3.7/94	4.3/109	2.8/71	2.8/71	2.7/68
Length, mm	27.0	29.9 ²	26.9	29.8	30.0
Weight, g	0.21	0.21	0.20	0.21	0.20
Fiber denier/shape	-----	-----	-----	-----	-----
Inner	-----	4.8/X	-----	3.9/Y	3.8/Y
Outer	3.3/I	3.4/Y	4.8/Y	3.8/Y	3.8/Y
Carbon, mg/plug	7	52	32	64	64
Tipping Paper					
Length, mm	32	36	32	35	35
Color	Cork	White	Cork	Cork	Cork
Ventilation, %	41	33	-----	-----	-----
<u>Filler</u>					
Total alkaloids, % (DWB)	2.08	1.87	2.06	1.81	1.89
Total red. sugars, % (DWB)	9.3	6.4	8.9	10.7	11.4
Reconstituted Tob., %	17	22	17	14	14
Expanded Stems, %	3	2	3	7	7
Floated Material, %	16	12	16	18	18
Wt. of tob., g (Corrected to 12.5% O.V.)	0.819	0.827	0.820	0.748	0.764
Rod Length, mm	72.6	69.5	72.8	68.7	68.5
Rod Density, g/cc	0.232	0.242	0.232	0.223	0.230

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

²The reported value includes the recessed portion.

*Space containing carbon granules.

**These cigarette papers are mechanically perforated.

80mm FILTER
70-85 mm NF

2050082002

80 MM FILTER CIGARETTES (BOX)

(Brands ranked according to FTC Tar, left to right)

	PR4B Parliament Lights	CL4B Camel Lights	KN4B Kent	WN4B Winston	MR4B Marlboro
¹ Sales	0.44	1.16	0.04	0.53	8.11
<u>Smoke</u>					
FTC Tar, mg/cigt.	8.7	9.2	12.5	14.9	15.9
Nicotine, mg/cigt.	0.66	0.78	1.00	1.05	1.00
Puffs/cigt.	7.6	8.8	8.2	8.0	8.6
Filtration Eff., %	56	52	45	45	44
Filler Rod TPM, mg/cigt.	32.0	32.4	30.3	30.1	31.7
CO, mg/cigt.	9.0	9.0	12.3	14.4	14.6
<u>Cigarette</u>					
Total RTD, in./mm of H ₂ O	4.7/119	4.3/109	3.9/99	4.9/124	4.6/117
Length, mm	79.2	78.6	79.9	79.0	79.2
Circumference, mm	24.9	24.9	25.0	24.8	24.8
<u>Paper</u>					
Components					
Type	Cit.	Cit.	Cit.	Cit.	Cit.
Percent	0.5	0.7	0.7	0.4	0.6
Porosity, sec.	15	17	24	17	21
<u>Filter</u>					
Type	CA	CA	CA	CA	CA
RTD, in./mm of H ₂ O	4.6/117	3.4/86	2.6/66	2.8/71	2.6/66
Length, mm	25.1 ²	23.0	21.0	19.0	19.0
Weight, g	0.14	0.14	0.12	0.11	0.12
Fiber denier/shape	2.4/Y	2.7/Y	2.8/Y	2.6/Y	3.1/Y
Tipping Paper					
Length, mm	30	27	25	24	23
Color	White	Cork	White	Cork	Cork
Ventilation, %	33	35	18	----	91
<u>Filler</u>					
Total alkaloids, % (DWB)	1.86	1.93	1.93	1.92	1.88
Total red. sugars, % (DWB)	6.5	7.2	8.1	7.8	7.1
Reconstituted Tob., %	22	24	19	23	20
Expanded Stems, %	2	None	None	None	2
Floated Material, %	12	15	12	16	12
Wt. of tob., g (Corrected to 12.5% O.V.)	0.646	0.703	0.699	0.733	0.729
Rod Length, mm	54.1	55.6	58.9	60.0	60.2
Rod Density, g/cc	0.242	0.257	0.239	0.250	0.247

¹Estimated domestic sales in billions of cigarettes for first quarter - Maxwell Report - April, 1984.

²The reported value includes the recessed portion.

2050082003

NON-FILTER CIGARETTES

(Brands ranked according to FTC Tar, left to right)

	PM1 Philip Morris	CM1 Camel	LS1 Lucky Strike	CH5 Chesterfield King	PL5 Pall Mall	PM5 P. M. Commander
¹ Sales	0.02	2.47	0.95	0.48	4.05	0.15
<u>Smoke</u>						
FTC Tar, mg/cigt.	19.1	19.3	23.8	(21.4)	22.0	24.2
Nicotine, mg/cigt.	1.19	1.36	1.49	(1.40)	1.40	1.51
Puffs/cigt.	7.4	6.6	8.0	(9.6)	9.3	9.5
Filler Rod TPM, mg/cigt.	32.9	32.8	38.6	29.0	30.2	30.8
CO, mg/cigt.	11.6	13.0	16.0	(12.4)	16.1	14.1
<u>Cigarette</u>						
Total RTD, in./mm of H ₂ O	2.2/56	2.4/61	2.4/61	3.1/79	3.0/76	2.6/66
Length, mm	69.9	68.9	68.8	84.8	83.7	84.2
Circumference, mm	24.8	25.0	25.0	24.9	24.6	24.8
<u>Paper</u>						
Components						
Type	Cit.	Cit.	Phos.	Cit.	Cit.	Cit.
Percent	0.7	1.6	0.8	0.6	0.7	0.7
Porosity, sec.	15	24	35	(11)	20	14
<u>Filler</u>						
Total alkaloids, % (DWB)	1.94	2.20	1.96	1.83	1.97	1.90
Total red. sugars, % (DWB)	8.3	7.5	10.7	12.9	10.7	7.8
Reconstituted Tob., %	20	11	16	8	18	20
Expanded Stems, %	2	None	4	7	3	2
Floated Material, %	15	15	10	17	9	15
Wt. of tob., g (Corrected to 12.5% O.V.)	0.812	0.810	0.857	0.990	1.027	0.993
Rod Density, g/cc	0.236	0.236	0.251	0.234	0.256	0.241

¹Estimated domestic sales in billions of cigarettes for first quarter -
Maxwell Report - April, 1984.

RECON
ES-ET

2050082004

CIGARETTE BLEND ANALYSIS
RECONSTITUTED TOBACCO¹

	Reconstituted Tobacco, % By Weight			
	1984 ⁴	1983 ³	1982 ²	1981
<u>PHILIP MORRIS</u>				
Marlboro Menthol	24	21	24	24
Saratoga 120	22	23	20	20
Alpine	22	21	24	24
Parliament Lights	22	20	22	22
Merit	22	20	21	21
B & H Deluxe Ultra Lights 100	21	22	18	-
B & H Multifilter	21	21	24	22
Benson & Hedges 100	21	21	21	21
Benson & Hedges 100 Lights	21	21	21	21
Merit Ultra Lights	20	22	21	22
Virginia Slims	20	21	21	21
Virginia Slims Lights	20	21	21	21
Marlboro Lights	20	21	20	21
Marlboro	20	21	20	21
Players	20	21	-	-
Philip Morris NF	20	18	20	19
Cambridge	17	15	12	14
<u>REYNOLDS</u>				
Sterling Special Blend	25	-	-	-
Camel	24	24	26	28
Salem Slim Lights 100	24	23	25	-
Salem	24	23	24	25
Salem Ultra Lights 85	24	23	22	23
Salem Ultra Lights 100	24	23	22	23
Winston Ultra Lights	23	25	24	23
Winston	23	25	24	23
More Lights Menthol	23	23	24	25
More Lights	23	23	24	25
More 120	23	23	24	24
Bright Menthol	22	24	-	-
Vantage Ultra Lights Menthol 85	22	24	24	-
Vantage Ultra Lights Menthol 100	22	24	24	-
Vantage	22	24	24	25
Vantage Ultra Lights	22	24	24	24
Doral II	22	19	23	21
Now	15	17	16	13
Camel NF	11	14	14	13
Now 80 (Box)	0	0	0	0
<u>BROWN & WILLIAMSON</u>				
Raleigh	12	11	11	11
Raleigh Lights	12	11	11	11
Kool Milds 85	11	12	13	13
Kool	11	12	13	12
Kool Lights	11	12	13	12
Viceroy	11	11	11	12
Kool Ultra	10	8	9	11
Belair 85	9	11	11	12
Belair 100	9	11	11	12
Barclay	7	8	9	8
Barclay 80,85	0	0	0	0
<u>AMERICAN</u>				
Pall Mall 100	18	16	17	17
Pall Mall NF	18	12	18	19
Silva Thins Menthol	17	20	20	22
Carlton	17	19	18	17
Carlton 120	17	19	18	17
Tareyton	17	17	19	18
Tareyton Lights	17	17	18	17
Tareyton Lights 100	17	17	18	17
Lucky Strike NF	16	14	15	15
Lucky Strike 85	15	17	-	-
Pall Mall Light 100	15	16	17	15
Silva Thins	12	12	11	8
<u>LORILLARD</u>				
Newport	21	20	21	20
True	20	20	20	21
Satin	19	23	-	-
Kent	19	20	21	20
Old Gold	19	17	21	22
Kent III	14	12	14	14
<u>LIGGETT GROUP</u>				
L & M	15	14	14	15
Lark	14	13	16	14
L & M 100	9	14	14	15
Chesterfield NF	8	8	10	10

¹The brand size will be reported separately only when the levels are different.

²The 1982 values for all manufacturers are the average of cigarettes manufactured in December, 1981 through December, 1982.

³The 1983 values for all manufacturers are the average of cigarettes manufactured in January through December, 1983.

⁴The 1984 values for all manufacturers are the average of cigarettes manufactured in January through May, 1984.

2050082005

	Floated Material % By Weight				Expanded Stems ² % By Weight			
	1984 ⁴	1983 ³	1982	1981	1984	1983	1982	1981
PHILIP MORRIS								
Cambridge	30	32	32	33	0	0	0	0
B & H Deluxe Ultra Lights 100	19	19	20	-	2	3	3	-
Merit Ultra Lights	18	22	20	21	0	0	0	0
Philip Morris NF	15	14	13	14	2	3	3	4
B & H Multifilter	15	13	12	12	2	3	3	4
Alpine	13	12	13	14	2	3	3	5
Marlboro Menthol	12	12	13	14	2	3	3	5
Saratoga 120	12	12	12	11	2	3	3	4
Virginia Slims Lights	12	12	12	12	2	3	3	4
Virginia Slims	12	12	12	12	2	3	3	4
Benson & Hedges 100 lights	12	12	12	12	2	3	3	4
Benson & Hedges 100	12	12	12	12	2	3	3	4
Parliament Lights	12	12	12	11	2	3	4	5
Marlboro Lights	12	12	12	11	2	3	4	4
Marlboro	12	12	12	11	2	3	4	4
Merit	12	12	12	11	2	3	3	4
Players	11	12	-	-	2	3	-	-
REYNOLDS								
Now 80 Box	93	94	93	94	0	0	0	0
Now	52	51	46	50	0	0	0	0
Vantage Ultra Lights Men. 100	37	36	35	-	0	0	0	-
Bright	30	29	-	-	0	0	-	-
Salem Ultra Lights 85	29	30	28	28	0	0	0	0
Vantage Ultra Lights Men. 85	28	28	25	-	0	0	0	-
More Lights Menthol 100	28	25	25	26	0	0	0	2
Salem Slim Lights 100	26	25	25	25	0	0	0	2
Vantage Ultra Lights	26	23	20	17	0	0	0	0
Doral II	25	26	26	27	0	0	0	0
Winston Ultra Lights	25	23	21	32	0	0	0	0
Vantage 100	21	16	15	16	0	0	0	0
Salem Ultra Lights 100	17	17	16	-	0	0	0	-
More Lights 100	17	16	15	15	0	0	0	2
More 120	17	16	15	15	0	0	0	0
Winston	16	16	14	14	0	0	0	0
Camel	15	16	18	17	0	0	0	0
Vantage 85	15	16	15	16	0	0	0	0
Camel NF	15	16	15	15	0	0	0	0
Salem	15	15	13	13	0	0	0	3
Sterling Special Blend	14	-	-	-	0	-	-	-
BROWN & WILLIAMSON								
Barclay BU, 85	32	35	34	33	0	0	0	0
Barclay	26	27	24	26	8	8	11	8
Kool Ultra	21	21	20	19	9	7	9	8
Belair 100	13	12	0	0	14	17	13	13
Belair 85	13	12	11	10	13	11	13	13
Kool Milds 85	12	12	13	11	10	11	11	13
Kool Lights	12	12	11	10	10	10	11	10
Kool	12	12	10	0	14	14	12	11
Viceroy	11	13	10	10	11	12	15	13
Raleigh Lights	11	12	0	0	12	12	14	13
Raleigh	4	4	0	0	12	12	14	13
AMERICAN								
Carlton	51	50	50	49	0	0	0	0
Tareyton Lights 85	39	41	41	41	3	3	4	2
Carlton 120	38	35	33	33	0	0	0	0
Tareyton	16	16	16	16	3	3	2	3
Tareyton Lights 100	16	16	16	15	3	3	4	2
Pall Mall Light 100	15	14	14	15	3	5	3	4
Lucky Strike 85	14	14	-	-	4	4	-	-
Silva Thins	11	10	4	0	10	7	14	8
Silva Thins Menthol	11	10	4	0	3	3	4	3
Lucky Strike NF	10	11	10	9	4	4	4	3
Pall Mall 100	9	9	9	9	3	4	5	4
Pall Mall NF	9	9	9	8	3	4	4	3
LORILLARD								
Kent III	25	24	25	26	0	0	0	0
True	12	22	22	22	0	0	0	0
Old Gold	12	12	13	12	0	0	0	0
Newport	12	12	12	11	0	0	0	0
Kent	12	11	12	12	0	0	0	0
Satin	12	11	-	-	0	0	-	-
LIGGETT GROUP								
L & M 100	26	29	14	15	7	6	7	8
Lark	18	19	18	16	7	6	7	6
L & M 85	18	19	17	16	7	6	7	8
Chesterfield NF	17	19	18	15	7	6	6	6

¹The brand size will be reported separately only when the levels are different.²American uses expanded longitudinally shredded stem.³The 1983 values for all manufactures are the average of cigarettes manufactured in January through December, 1983.⁴The 1984 values, for all manufacturers, are the average of cigarettes manufactured in January through May, 1984.

2050082006

MINOR
BRANDS

MINOR BRANDS

Brand	Size, mm	FTC Tar, mg/ cigt.	Nico- tine, mg/ cigt.	Total RTD, in./mm of H ₂ O	Venti- lation, %	Tipping Paper Length, ¹ mm	Filter Length, mm	Filter Type ²
<u>FILTER - PLAIN</u>								
BENSON & HEDGES (BOX)	70	1.4	0.14	3.8/96	71	30W	25	CA
Newport Non-Menthol (Box)	80	12.9	1.10	4.5/114	9	30CK	21	CA
L & M (Box)	79	13.4	0.99	4.6/117		26W	21	CA
Triumph	84	3.4	0.36	3.7/94	66	32CK	25	CA
Pall Mall Extra Light	85	6.9	0.65	4.2/107	47	30CK	25	CA
Old Gold Lights	84	9.3	0.91	4.2/107	29	32CK	25	CA
Chesterfield	85	12.1	0.92	4.8/122		30CK	25	CA
Newport Non-Menthol	84	13.7	1.13	5.0/127	7	30CK	25	CA
BENSON & HEDGES (BOX)	85	14.6	1.20	4.3/109	19	30W	20/5	CA
Pall Mall	85	16.8	1.28	4.9/124		24CK	20	CA
Half & Half	85	18.4	1.56	4.7/119		24CK	20	CA
Bull Durham	84	29.0	2.15	3.2/81		24CK	20	CA
Winston International (Box)	93	16.6	1.20	4.2/107	7	31CK	27.5	CA
Triumph	99	4.6	0.49	4.4/112	56	35CK	27	CA
Lucky Strike	100	11.0	0.93	4.2/107	38	32CK	27	CA
Eve Slim Lights (Box)	97	11.5	0.94	5.1/130		35W	30	CA
HI-LITE (BOX)	98	13.3	1.04	4.8/122	23	31.5CK	27.5	CA
St. Moritz	99	13.8	1.15	4.7/119		34W	27	CA
BENSON & HEDGES (BOX)	99	16.2	1.05	5.1/130	11	32W	27.5	CA
MARLBORO (BOX)	98	16.3	1.09	4.9/124	12	31.5CK	27.5	CA
PHILIP MORRIS INTERNATIONAL (BOX)	99	16.7	1.11	4.9/124	10	32CK	27.5	CA
Old Gold	99	20.0	1.69	4.4/112		32CK	27	CA
Eve Lights (Box)	120	14.8	1.18	4.5/114	55	35W	30	CA
Long Johns	119	18.0	1.54	5.4/137	39	35B	30	CA
Max	120	18.8	1.54	5.2/132	16	35W	30	CA
Tall	120	21.3	1.68	6.1/155	30	35W	30	CA
<u>FILTER - CHARCOAL</u>								
GALAXY	85	14.0	0.98	4.3/109	11	30CK	25	C-CA/CA

¹Tipping Paper Color: W = White, CK = Cork, B = Brown

²Filter Type: CA = Cellulose Acetate, C = Carbon

2050082007

MINOR BRANDS

Brand	Size, mm	FTC Tar, mg/ cigt.	Nico- tine, mg/ cigt.	Total RTD, in./mm of H ₂ O	Venti- lation, %	Tipping Paper Length, ¹ mm	Filter Length, mm	Filter Type ²
<u>FILTER - MENTHOL</u>								
Kool (Nonfilter)	70	21.0	1.42	2.3/58		11CK		
Newport Lights (Box)	80	8.2	0.74	3.9/99	31	30CK	25	CA
Newport (Box)	80	16.0	1.26	4.4/112		25CK	21	CA
Kool (Box)	80	16.1	1.20	4.7/119		23CK	18	CA
Triumph	84	3.6	0.38	3.6/91	64	32CK	25	CA
Montclair	83	15.4	1.10	5.0/127		24W	20	CA
Iceberg 100's	100	3.8	0.34	4.8/122	58	32W	27	CA
Triumph	99	4.9	0.50	4.2/107	56	35CK	27	CA
Carlton	100	5.3	0.46	5.2/132	53	32W	27	CA
Eve Slim Lights (Box)	98	11.7	0.94	5.1/130		35W	30	CA
Pall Mall Lights	100	12.6	1.10	4.8/122		32W	27	CA
St. Moritz	99	14.0	1.16	4.6/117		34W	27	CA
BENSON & HEDGES (BOX)	99	15.6	1.06	4.9/124	12	32W	27.5	CA
Kent	99	16.0	1.34	3.4/86	18	32W	27	CA
PHILIP MORRIS INTERNATIONAL (BOX)	98	17.0	1.18	5.3/135	10	32CK	27.5	CA
Spring	99	19.4	1.18	3.6/91		32W	27	CA
Eve Lights (Box)	120	15.6	1.25	4.4/112	54	35W	30	CA
Max	120	18.6	1.53	5.2/132	16	35W	30	CA
Tall	120	18.8	1.55	6.7/170	34	35W	30	CA
Long Johns	120	19.0	1.68	6.0/152	31	35B	30	CA
<u>NON-FILTER</u>								
Chesterfield	70	17.9	1.23	2.4/61				
ENGLISH OVALS (BOX)	68	21.1	1.80	2.9/74				
Picayune	70	22.7	1.55	3.0/76				
PLAYERS (BOX)	70	23.7	2.02	3.1/79				
Raleigh	84	24.8	1.55	2.7/68				
H. Tareyton	85	24.8	1.70	2.6/66		15CK		
ENGLISH OVALS (BOX)	84	25.0	2.26	3.8/96				
Old Gold	85	25.4	1.79	2.5/64				

¹Tipping Paper Color: W = White, CK = Cork, B = Brown

²Filter Type: CA = Cellulose Acetate, C = Carbon

2050082008

CIGARETTES ON MARKET WITH TAR AND NICOTINE DATA LISTED ON PACK

	Tar, mg/cigt.			Nicotine, mg/cigt.		
	Listed On Package	FTC ¹ Data	CI Data	Listed On Package	FTC ¹ Data	CI Data
<u>AMERICAN</u>						
Carlton 85 (Box)	<0.01	<0.5	0.00	0.002	<0.05	0.00
Carlton Menthol 85	<1	1	1	0.1	0.1	0.1
Carlton 100 (Box)	<1	1	1	0.1	0.1	0.1
Carlton 85	1	1	2	0.2	0.1	0.2
Iceberg 100's	4	3	4	0.4	0.3	0.3
Carlton Menthol 100	5	5	5	0.5	0.4	0.5
Tareyton Lights 85	5	5	5	*	0.4	0.4
Carlton 100	5	5	5	0.5	0.4	0.4
Pall Mall Extra Light 85	7	7	7	*	0.6	0.6
Carlton Menthol 120	7	6	7	0.7	0.5	0.6
Carlton 120	7	6	7	0.7	0.6	0.6
<u>LORILLARD</u>						
Triumph Menthol 85	2	3	4	0.3	0.3	0.4
Triumph 85	3	3	3	0.4	0.4	0.4
Triumph Menthol 100	4	4	5	0.5	0.5	0.5
Triumph 100	4	4	5	0.5	0.4	0.5
<u>PHILIP MORRIS</u>						
Cambridge 83 (Box)	<0.1	<0.5	0.00	*	<0.05	0.00
Cambridge 84	1	1	1	*	0.1	0.1
Merit Ultra Lights 85	4	4	4	0.4	0.3	0.3
Merit Ultra Lights Menthol 85	4	4	4	0.4	0.3	0.3
Cambridge 100	5	5	4	*	0.4	0.4
Merit Ultra Lights 100	5	6	4	0.5	0.5	0.4
Merit Ultra Lights Menthol 100	5	4	4	0.5	0.3	0.3
B & H Deluxe Ultra Lights 100 (Box)	6	6	6	0.6	0.5	0.4
B & H Deluxe Ultra Lights Menthol 100 (Box)	6	6	6	0.6	0.5	0.4
Merit 85	8	9	8	0.6	0.6	0.6
Merit Menthol 85	8	9	8	0.6	0.6	0.6
Merit 100	10	11	10	0.8	0.7	0.7
Merit Menthol 100	10	10	10	0.8	0.7	0.7
B & H Multifilter Menthol 85	13	13	12	0.9	0.8	0.8
B & H Multifilter 85	13	12	12	0.9	0.8	0.8
<u>REYNOLDS</u>						
Now 80 (Box)	<0.5	<0.5	0.00	*	<0.05	0.00
Now 85	1	1	1	*	0.1	0.2
Now Menthol 85	1	1	2	*	0.1	0.2
Doral II 85	4	5	4	0.4	0.4	0.4
Doral II Menthol 85	4	5	5	0.4	0.4	0.4
Vantage Ultra Lights 85	5	5	6	*	0.4	0.5
Vantage Ultra Lights 100	5	5	5	*	0.4	0.4
Vantage Ultra Lights Menthol 85	5	5	5	*	0.4	0.4
Vantage Ultra Lights Menthol 100	5	5	5	*	0.4	0.5
More Lights Menthol 100 (Box)	8	7	8	*	0.6	0.7
More Lights 100 (Box)	8	8	9	*	0.6	0.8
Vantage 85	9	9	9	*	0.7	0.7
Vantage Menthol 85	9	10	9	*	0.7	0.7
Vantage 100	9	9	9	*	0.7	0.7
Vantage Menthol 100	9	-	10	*	-	0.8

¹FTC data published March, 1984.

*Not listed.

2050082009

COUPON BRANDS

Twelve cigarette brands are now carrying coupons.

PHILIP MORRIS

Alpine (85)

Galaxy (85)

AMERICAN BRANDS

None

BROWN & WILLIAMSON¹

Belair (85 & 100)

Raleigh Filter (85 & 100)

Raleigh Nonfilter (85)

Raleigh Lights (85 & 100)

LORILLARD

None

LIGGETT GROUP

Chesterfield Nonfilter (70 & 85)

Chesterfield Filter 85

REYNOLDS

None

¹These brands contain 2 coupons per pack and 8 coupons in the carton.

PLEASE NOTE

THE APPENDIX SECTION WHICH INCLUDES THE SUMMARY OF BRAND CHANGES, THE DESCRIPTION OF DATA REPORTED, AND EXPERIMENTAL PROCEDURES HAS BEEN UPDATED IN THIS REPORT.

PLEASE RETAIN THIS COPY FOR A REFERENCE AS THESE SECTIONS WILL NOT BE INCLUDED AGAIN UNTIL JANUARY, 1985. THIS WILL SAVE A CONSIDERABLE AMOUNT OF PAPER AND EFFORT BY NOT INCLUDING THE APPENDIX SECTION IN EACH MONTH'S REPORT.

THE SUMMARY OF COMPETITIVE BRAND CHANGES IS ARRANGED ALPHABETICALLY BY COMPANY. ALSO, THE BRANDS ARE LISTED ALPHABETICALLY FOR YOUR CONVENIENCE IN LOCATING A SPECIFIC BRAND.

2050082011

APPENDIXSUMMARY OF COMPETITIVE BRAND CHANGES OBSERVED SINCE APRIL, 1960A. AMERICAN BRANDSAMERICAN BRAND 80

80 mm - Test marketed in hard box (80 mm) - No unusual characteristics. 4/71

AMERICAN BRAND 85

85 mm - Test marketed in soft pack (85 mm) - No unusual characteristics. 4/71

AMERICAN LIGHTS 120

Plain - Introduced 120 mm cigarette with a 40 mm CA filter and a tipping paper length of 45 mm - Tar (8 mg) lower than any 120 mm entry to date. 4/76

AMERICAN LIGHTS MENTHOL 120

Menthol - Introduced 120 mm cigarette with a 40 mm CA filter and a tipping paper length of 45 mm - Tar (9 mg) lower than any 120 mm entry to date. 4/76

AMERICAN LONGS 120

Plain - Introduced 120 mm cigarette with a white cigarette paper - 30 mm CA filter - Tar (19 mg) and nicotine (1.5 mg) deliveries. 9/75

AMERICAN LONGS MENTHOL 120

Menthol - Introduced 120 mm cigarette with a white cigarette paper - 30 mm CA filter - Tar (16 mg) and nicotine (1.3 mg) deliveries. 9/75

AMERICAN OVALS 100

100 mm cigarette with 25 mm CA filter made like a normal cigarette and pressed into its oval shape. 6/69

BERMUDA 85

Test marketed - king size - 20 mm CA filter, high TPM, low RTD. 5/65

BRIGHTON 85

Test marketed - king size - dual filtered mentholated - similar to Montclair. 4/65

A. AMERICAN BRANDS (continued)BRIGHTON CONVERTIBLE MENTHOL 100

Same as Tennyson Menthol 100 - Introduced in test market. 4/68

BRIGHTON PINCH MENTHOL 100

Similar to previously introduced Brighton Convertible Menthol 100 and Tennyson Menthol 100. 11/68

BULL DURHAM 85

Introduced - king size with larger circumference than normal cigarettes - 20 mm CA filter. 6/66

CARLTON 70

70 mm cigarette with 25 mm CA filter - Tar (0.7 mg), nicotine (0.15 mg). Data noted on pack "Tar" = 3 mg - Nicotine = 0.3 mg. 5/69

Increased filter ventilation, a more porous cigarette paper and a smaller circumference lowered tar to 1 mg and nicotine to 0.1 mg deliveries. 1/76

Expanded tobacco introduced at 35% level; reconstituted tobacco level decreased (25 to 18%). 9/76

CARLTON 85

Introduced - king size, dual filter with paper inner filter containing 3 mg of carbon - paper perforated immediately in front of tipping paper - TPM (8 mg), nicotine (0.5 mg) - Package label states: "Tar" = 2.5 mg, Nicotine = 0.4 mg. 1/64

TPM and nicotine reduced by changing to filter ventilation - Package label states: "Tar" = 2.7 mg, Nicotine = 0.3 mg. 5/64

TPM (3 mg) and nicotine (0.2 mg) increased - less efficient filter - Package label states: "Tar" = 3.9 mg and Nicotine = 0.4 mg. 10/64

TPM and nicotine deliveries increased by changing filter ventilation - "Tar" and nicotine data no longer stated on label. 1/65

TPM, nicotine and organic gas phase deliveries increased - Changes observed in total RTD, fiber denier and tobacco weight - Alkaloids increased slightly. 5/65

Total RTD decreased. 4/66

2050082013

A. AMERICAN BRANDS (continued)CARLTON 85 (continued)

TPM and nicotine decreased - Filter efficiency increased as result of fiber denier changed. 5/66

"Tar" and nicotine data stated on package label. "Tar" = 9.5 mg and nicotine = 0.6 mg. 6/66

TPM and nicotine decreased, 3 mg and 0.1 mg by increasing ventilation. Data on pack changed - "Tar" = 9 mg and nicotine = 0.6 mg. 10/66

Data on pack changed - "Tar" = 7 mg and Nicotine = 0.5 mg. 4/67

Tar (2 mg) and nicotine (0.2 mg) decreased by increase in filter ventilation. 10/67

Tar (1 mg) and nicotine (0.1 mg) increased by changes in fiber shape and fiber denier. 12/67

A model of Carlton with 25 mm CA filter introduced with tar of 2.0 mg. 2/69

Filter change from 20 mm dual filter to 25 mm CA filter. 7/69

Tar (4 to 1 mg) and nicotine (0.4 to 0.2 mg) reduced by increased filter ventilation and lowering tobacco weight - Expanded tobacco content increased from 0 to 42%. 3/76

CARLTON 85 (BOX)

Cigarettes packaged in a flip top box to replace the 70 mm Carlton cigarettes already on the market. Similar to Carlton 85 soft pack cigarettes. Tar (1 mg) and nicotine (0.1 mg) listed on pack. 1/77

Tar (<1.0 to <0.01 mg) and nicotine (0.1 to 0.002 mg) data listed on pack changed as indicated. 3/81

Ventilation was changed from four to six rows of laser perforation. Paper porosity changed from 14 to 7 sec. Both tar and nicotine deliveries of these cigarettes remains at 0.00 mg. 8/81

CARLTON MENTHOL 85

Introduced - Mentholated version of Carlton 85 plain. 1/72

Tar (4 to 1 mg) and nicotine (0.4 to 0.1 mg) reduced by increased filter ventilation and lowering tobacco weight - Expanded tobacco content increased from 0 to 45%. 2/76

CARLTON 100'S

National distribution - low tar (6 mg) and nicotine (0.5 mg) achieved by a 27 mm CA filter containing ventilation (52%). A low tobacco weight and rod density resulted from high ET content (35%). Tar (5 mg) and nicotine (0.5 mg) listed on pack. 4/77

Lower tar (5.9 to 4.4 mg) and nicotine (0.5 to 0.4 mg) deliveries resulted from a change to a more porous cigarette paper. 11/77

205082014

A. AMERICAN BRANDS (continued)CARLTON 100 (BOX)

Introduced - Tar (0.8 mg) and nicotine (0.08 mg) -
Ultra low delivery result of high filter ventilation (84%). 4/80

CARLTON MENTHOL 100 (Box)

Introduced in Texas - Tar (1.0 mg) and nicotine (0.1 mg) -
similar to Carlton 100 (Box). 1/82

CARLTON MENTHOL 100

Introduced on test market - Low delivery (4 mg tar and
0.4 mg nicotine) mentholated cigarettes similar to
Carlton 100 cigarettes previously introduced. Blend
contains 33% ET. 11/77

CARLTON SLIMS DELUXE 100 (BOX)

National distribution-delivers 7 mg tar and 0.6 mg nicotine. 1/84

CARLTON SLIMS DELUXE MENTHOL 100 (BOX)

National distribution-delivers 7 mg tar and 0.6 mg nicotine. 1/84

CARLTON 120

Introduced - test market - Tar (7.2 mg) and nicotine
(0.61 mg). The blend contains 34% expanded tobacco -
ventilation system consists of two rows of laser perforation. 7/81

CARLTON MENTHOL 120

Introduced - test market - Tar (6.4 mg) and nicotine
(0.59 mg). The ventilation system consists of two rows
of laser perforation. 8/81

Tar (5.9 to 7.4 mg), nicotine (0.57 to 0.77 mg), and CO
(4.5 to 6.6 mg) increased - ventilation (37 to 28%)
decreased. 11/82

COLD HARBOR 85

Introduced - king size in soft pack - similar to Waterford
with menthol added to filler. 6/66

COLONY FILTER 85

Introduced - One of the first American Tobacco brands with
coupons - 20 mm CA filter. 9/66

COLONY MENTHOL 85

Introduced - One of the first American Tobacco brands with
coupons - 20 mm CA filter. 9/66

COLONY FILTER 100

Introduced - 100 mm cigarette with 20 mm CA filter. 5/67

2050082015

A. AMERICAN BRANDS (continued)COLONY MENTHOL 100

Introduced - 100 mm cigarette with 20 mm CA filter. 5/67

COMPASS 85

Test marketed - king size mentholated - 20 mm CA filter. 6/65

DOUBLE EIGHT 88

Double Eight, 88 mm long, replaced Pall Mall 88 on the market - Packaged in a black and white striped pack. 7/68

FIFTY-FIFTY 100

Introduced - 100 mm cigarette with 45 mm CA filter. 2/67

Tar (5 mg) and nicotine (0.2 mg) increased by changes in cigarette paper. 10/67

FRESH CONVERTIBLES 100

Similar to Tennyson Convertible Menthol 100, plug-space-plug filter, with capsules containing menthol and carbon granules in space. 9/69

H. TAREYTON 85 (NF)

Removed from C.I. tables. History of brand in C.I. 5/64. 11/63

HALF & HALF 85

Introduced - king size in soft pack with "pipe tobacco blend". 5/64

ICEBERG 10 MENTHOL 85

Low delivery (10 mg tar and 0.8 mg nicotine) with new Filtrona filter - Mentholated cigarette. Blend contains expanded tobacco (4%) and expanded RKS (3%). 5/72

ICEBERG MENTHOL 100

Test marketed - 100 mm mentholated cigarette with a 30 mm "Filtrona-type" filter similar to the one used on Lucky Ten 100. Blend contains expanded tobacco and stems. 2/74

Cigarette re-engineered - Tar (10 to 5 mg) and nicotine (0.7 to 0.3 mg) decreased. Filtrona-type filter replaced by standard CA filter with 47% ventilation. 7/76

LTC 85

LTC (low tar cigarette) - similar to Lucky Ten in all characteristics. 8/71

LONG JOHNS 120

Introduced 120 mm cigarette with brown paper colored with azo dyes. Circumference 22.5 mm. Tar (20 mg) and nicotine (1.7 mg) deliveries. 5/75

2050082016

A. AMERICAN BRANDS (continued)LONG JOHNS MENTHOL 120

Introduced 120 mm menthol cigarette with brown paper colored with azo dyes. Circumference 22.5 mm. Tar (17 mg) and nicotine (1.4 mg) deliveries.

5/75

LUCKY 100'S

Introduced - Similar to previously marketed Lucky Ten 100 - 30 mm "Filtrona" filter.

6/74

Cigarette re-engineered - Tar (10 to 5 mg) and nicotine (0.8 to 0.4 mg) decreased. Filtrona-type filter replaced by standard CA filter with 47% ventilation.

7/76

LUCKY FILTERS 100

Introduced - 100 mm cigarette with a 20 mm dual filter; 10 mm crimped tobacco with carbon and 10 mm CA filter.

3/67

Filter length (20 to 25 mm) increased, tar lower by 1 mg.

7/68

Name changed - Lucky Strike 100 to Lucky Filters 100.

8/68

Coupon added to pack.

6/69

Filter change from 25 mm dual filter to 25 mm CA filter, cigarette paper porosity change (12 to 21 seconds), tar (1 mg) and nicotine (0.1 mg) increased.

9/69

Reconstituted tobacco decreased (20 to 15%).

10/69

LUCKY FILTERS (POLYMER) - 85

85 mm version of Lucky Filters, with a new polymer filter, was introduced. The twenty-five (25) mm filter consists of a CA-space-CA (10-5-10) with the space containing approximately 100 mg of polyethylene and alumina.

9/68

LUCKY FILTERS (POLYMER) - 100

100 mm version of Lucky Filters, with a new polymer filter, was introduced. The twenty-five (25) mm filter consists of a CA-space-CA (10-5-10) with the space containing approximately 100 mg of polyethylene and alumina.

9/68

2050082017

A. AMERICAN BRANDS (continued)LUCKY STRIKE 70 (NF)

Paper porosity and paper component increased - TPM reduced by 5 mg.	1/62
TPM increased by 2 mg.	7/62
TPM increased by 1 mg.	12/62
TPM decreased by 1.5 mg.	6/63
TPM decreased by 2 mg by changing paper component and porosity.	5/64
Reconstituted tobacco content increased (7 to 11%).	4/66
Circumference and tobacco weight decreased.	9/66
TPM and nicotine increased, 6 mg and 0.2 mg respectively, by changing paper component, citrate to phosphate, and decreasing paper porosity.	10/66
Reconstituted material increased 9 to 12%.	9/68
Reconstituted material increased 12 to 17%.	10/70
Expanded tobacco added to blend (4%).	1/72
Expanded tobacco increased 4 to 6%.	1/74
Lower tar (1 mg) and nicotine (0.1 mg) correlating with a lower filler rod TPM.	11/75
Tar delivery (27 to 25 mg) decreased by increase in paper porosity.	2/76

LUCKY STRIKE FILTER 80

Plain - Test marketed in a soft pack - First 80 mm cigarette in a soft pack in the U.S. - High tar (26 mg) and nicotine (1.6 mg) correlating with a low filtration efficiency.	12/75
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LUCKY STRIKE FILTER 85

Test marketed - king size triple filter (CA; carbon on CA; CA) - filter has gas phase activity.	8/64
Test marketed with 20 mm CA filter - high TPM.	11/64
TPM (2 mg) and nicotine (0.1 mg) decreased by increase in filter efficiency.	11/66
TPM (2 mg) and nicotine (0.1 mg) decreased by increase in paper porosity.	12/66
TPM reduced by a filter change from single CA to dual filter - Dual filter consisted of inner filter made from crimped tobacco sheet with embedded carbon and an outer CA filter.	9/67
Change from 20 mm dual filter to 20 mm CA filter.	8/69
Reconstituted tobacco increased (14 to 18%).	4/70
Tar (3 mg) and nicotine (0.3 mg) increased as result of blend change.	5/70

A. AMERICAN BRANDS (continued)LUCKY STRIKE 85

Introduced - test market - delivers 11.6 mg tar and 0.94 mg nicotine. The cigarette length is 83 mm. American Brands has no other 85 mm cigarette in the 10-12 mg tar category.

11/81

LUCKY STRIKE 85 (BOX)

Introduced - test market - delivers 11.2 mg tar and 0.88 mg nicotine. The ventilation consists of one row of laser perforation. The cigarette length is 83 mm. American Brands has no other 85 mm cigarette in the 10-12 mg tar category.

11/81

LUCKY STRIKE MENTHOL 85

Introduced - 85 mm mentholated cigarette with 20 mm CA filter.

6/66

LUCKY STRIKE MENTHOL 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter.

4/67

TPM (2 mg) and nicotine (0.2 mg) decreased by changing to a more porous paper.

5/67

Filter length (20 to 25 mm) increased, tar lower (1 mg).

7/68

LUCKY STRIKE LIGHTS 85

Introduced - deliveries 7 mg tar - has the shortest cigarette length of any king size cigarette in a soft pack.

11/83

LUCKY STRIKE LIGHTS 100

Introduced - delivers 9 mg tar.

11/83

LUCKY TEN 85

Low delivery (10 mg tar and 0.8 mg nicotine) with new Filtrona filter - Blend contains expanded tobacco (5%).

8/71

A decrease in tar (9 to 8 mg) resulting from a change in filters from a 25 mm Filtrona-type filter to a 25 mm standard CA filter containing ventilation (35%). Lower total RTD noted.

4/77

2050082019

A. AMERICAN BRANDS (continued)LUCKY TEN 100

Test marketed - 30 mm Filtrona filter with triangular openings at each end and constricted in the middle. 5% expanded tobacco. Tar (9 mg) and nicotine (0.9 mg) listed on pack.

4/73

MARYLAND 100

100 mm cigarette with 100% air-cured tobacco - No RKS or reconstituted material.

3/70

MARYLAND MENTHOL 100

100 mm mentholated cigarette with 100% air-cured tobacco - Contains no reconstituted material or RKS.

10/70

MERMAID MENTHOL 100

Test marketed - 25 mm CA filter - Blend contains RKS which has been processed to give an expanded appearance.

11/71

MONTCLAIR 85

Introduced - mentholated, dual filter, carbon section - released menthol, which is concentrated there, as TPM is picked up - has no gas phase activity.

3/62

TPM, nicotine, and menthol deliveries increased.

8/62

Paper component identified as chloride type.

4/63

TPM and nicotine deliveries increased by changing filter ventilation - "Tar" and nicotine data no longer stated on label.

1/64

TPM reduced 7 mg as result of a new filter and filter ventilation - Package label states: "Tar" = 5.2 mg, Nicotine = 0.5 mg.

5/64

TPM reduced 5 mg. Nicotine delivery also decreased, RTD increased. TPM reduced 4 mg by changing paper component and porosity.

6/64

Carbon type changed, coconut to coal.

10/64

TPM (4 mg) and nicotine (0.2 mg) increased, less efficient filter - Package label states: "Tar" = 6.9 mg, Nicotine = 0.7 mg.

11/64

Menthol content and delivery increased.

8/65

Menthol content and delivery increased.

7/66

TPM (2 mg) decreased by increasing filter ventilation.

5/67

2050082020

A. AMERICAN BRANDS (continued)MONTCLAIR 85 (continued)

TPM (4 mg) and nicotine (0.2 mg) decreased by changes in filter ventilation, filter efficiency, and paper porosity.	6/67
Coupon added to pack.	9/67
Circumference decreased (25.2 to 24.9 mm); lower tobacco weight noted.	12/68
Reconstituted tobacco content increased (20 to 36%).	4/69
Change from 20 mm dual filter to 20 mm CA filter.	8/69
Reconstituted tobacco decreased (36 to 28%).	10/69
Tar (6 mg) and nicotine (0.5 mg) increased by elimination of filter ventilation, change to less porous paper.	
Reconstituted tobacco decreased (28 to 19%).	4/70
Reconstituted tobacco increased (19 to 25%).	9/71
Expanded tobacco added to blend (3%) - Higher filler menthol and menthol delivery noted.	2/73
Expanded stems added to blend (12%) and reconstituted material decreased from 17 to 8% - No change in smoke deliveries.	3/73
Expanded tobacco removed from blend. Tar (1 mg) and nicotine (0.1 mg) decreased - Alkaloids and sugars lower.	2/75

PALL MALL 85 (NF)

Paper porosity and RTD increased; TPM and nicotine deliveries reduced (3 mg and 0.1 mg).	4/63
Nicotine delivery reduced slightly.	6/63
TPM and nicotine reduction, 6 mg and 0.2 mg respectively, by changing paper component, phosphate to citrate, and increasing paper porosity.	1/64
TPM and nicotine increased, 7 mg and 0.3 mg respectively, by changing paper component, citrate to phosphate, and decreasing paper porosity.	10/66
Reconstituted material increased, 9 to 12%.	4/67
TPM (6 mg) and nicotine (0.2 mg) decreased by changing paper additive and increasing paper porosity.	5/67
Expanded tobacco added to blend (2%).	1/73
Expanded tobacco increased from 2 to 6%.	1/74
Expanded stems added to blend (3%).	9/75
Lower tar (1 mg) and nicotine (0.1 mg) correlating with a lower filler rod TPM.	11/75
Lower tar (25 to 23 mg) and nicotine (1.5 to 1.4 mg) deliveries resulting from a change to a more porous cigarette paper.	6/79
Cigarette length (84.8 to 83.7 mm) decreased.	8/82

2050082021

A. AMERICAN BRANDS (continued)PALL MALL 88

Pall Mall cigarettes, 88 mm long, introduced in white pack with gold lettering. 5/68

PALL MALL 100

Plain - Test marketed in new air tight hermetically sealed "polyfoil pak." 10/74

Freon expanded tobacco has been added at the 9% level resulting in a lower tobacco weight (0.905 to 0.865 g). 7/81

PALL MALL MENTHOL 100

Menthol - Test marketed in new air tight hermetically sealed "polyfoil pak." 10/74

PALL MALL EXTRA MILD 80

Low delivery (9 mg tar and 0.7 mg nicotine) with new Filtrona molded filter - Blend contains expanded tobacco (4%) - Similar to Lucky Ten 85 in most characteristics. 7/72

PALL MALL EXTRA LIGHT 85

85 mm cigarette similar to 80 mm version previously introduced in 7/72. 8/72

Tar (6 mg) and nicotine (0.7 mg) decreased - Filtrona filter with no ventilation was replaced by a standard CA filter with 45% ventilation. Tobacco weight and rod density were higher as result of elimination of ET from blend. 6/76

Brand name changed from Pall Mall Extra Mild 85 to Pall Mall Extra Light 85. No changes in smoking or physical characteristics. Tar delivery listed on pack as "7 mg or Less". 4/78

PALL MALL FILTER 80 (BOX)

Test marketed in hard box (80 mm) - Tar (19 mg) and nicotine (1.2 mg) deliveries. 5/71

Reintroduced - plain - test marketed in a red flip top box similar in color and design to the soft pack used for Pall Mall 85 Nonfilter cigarettes - High tar (24 mg) and nicotine (1.5 mg) deliveries correlating with a low filtration efficiency. 12/75

A. AMERICAN BRANDS (continued)PALL MALL FILTER 85

Test marketed in soft pack (85 mm) - Tar (20 mg) and nicotine (1.3 mg) deliveries. 5/71

Reintroduced - plain - test marketed in a red soft pack similar to that used for Pall Mall 85 Nonfilter cigarettes - Filter RTD extremely low resulting in a low filtration efficiency - Tar (25 mg) and nicotine (1.6 mg) deliveries. 10/75

Tar (25 to 18 mg) and nicotine (1.6 to 1.2 mg) decreased as result of a longer (17 to 20 mm), more efficient filter. 12/76

PALL MALL FILTER 95

Introduced - 95 mm long cigarette in gold crush-proof box with hinge top - 15 mm CA filter. 3/66

Tar (6 mg) and nicotine (0.3 mg) reduced by increasing filter length (15 to 25 mm) and tipping paper (21 to 30 mm). 2/68

Brand discontinued - Replaced with 100 mm size in crush-proof box. 3/71

PALL MALL FILTER MENTHOL 95

Introduced - 95 mm long in new type package - mentholated - 15 mm CA filter. 11/65

Tipping paper increased (19 to 21 mm). 7/67

Tar (6 mg) and nicotine (0.2 mg) reduced - single package comprised of twin crush-proof boxes - one box contains ten mentholated and the other ten non-mentholated cigarettes. 2/68

PALL MALL FILTER 100

Test marketed - 100 mm long - Same as Pall Mall nonfilter with 15 mm CA filter. 10/64

TPM (5 mg) and nicotine (0.2 mg) decreased by an increase in filter efficiency. 11/66

Tipping paper increased 19 to 21 mm. 2/67

Reconstituted material increased 9 to 12%. 4/67

TPM (3 mg) decreased by increasing filter length (17 to 20 mm) and by increasing paper porosity. 5/67

Tar (2 mg) and nicotine (0.3 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 10/67

Circumference decreased (24.7 to 24.4 mm) and tobacco weight decreased, no change in tar or nicotine. 11/68

Tar (1 mg) and nicotine (0.1 mg) reduced by an increase in filter efficiency - High total and filter RTD noted. 10/70

Filter length (25 to 27 mm) and tipping paper (30 to 32 mm) increased - No change in smoke deliveries. 3/74

Addition of 3% ES to blend. 4/75

2050082023

A. AMERICAN BRANDS (continued)PALL MALL FILTER MENTHOL 100

Introduced - 100 mm mentholated cigarette with 15 mm CA filter. 10/66

Tipping paper increased (19 to 21 mm). 2/67

TPM (2 mg) decreased by increasing filter length (17 to 20 mm) and by increasing paper porosity. 5/67

Tar (2 mg) and nicotine (0.3 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 10/67

Tar (1 mg) and nicotine (0.1 mg) reduced by a blend change. 3/68

Circumference decreased (24.9 to 24.6 mm) and tobacco weight decreased, no change in tar and nicotine. 11/68

Tar (1 mg) and nicotine (0.1 mg) increased by changes in blend and heavier tobacco weight; smoke and filler menthol decreased. 10/69

Reconstituted tobacco decreased (22 to 17%). 10/69

Reconstituted tobacco increased (16 to 21%). 10/70

Addition of expanded RKS (11%) and expanded tobacco (3%) to blend - Reconstituted tobacco content reduced (21 to 7%). Alkaloids increased and fiber shape changed from X to Y - shape. Total and filter RTD increased. 5/72

Expanded tobacco removed from blend. Tar (1 mg) and nicotine (0.1 mg) decreased. Alkaloids and sugars lower. 2/75

PALL MALL FILTER 100 (BOX)

Plain - This new 100 mm cigarette in a crush-proof box replaces the previously marketed Pall Mall 95 cigarettes in a flat twin pack. 4/71

PALL MALL FILTER MENTHOL 100 (BOX)

Menthol - This new 100 mm cigarette in a crush-proof box replaces the previously marketed Pall Mall 95 cigarettes in a flat twin pack. 4/71

PALL MALL LIGHT 100'S

Introduced - 100 mm low tar (12 mg) and nicotine (1.0 mg) brand characterized by 27 mm filter with 24% ventilation. Blend contains 8% expanded tobacco and 2% expanded stems. 7/78

Tar (10.6 to 8.1 mg), nicotine (0.94 to 0.74 mg) and CO (10.3 to 7.6 mg) reduced - increase in filter ventilation (28 to 47%) decrease in filter RTD (4.6 to 3.6). 2/81

Tar (8.4 to 10.9 mg), nicotine (0.8 to 1.0 mg), and CO (8 to 10 mg) increased due to reduced ventilation (53 to 36%) - total RTD increased (3.2 to 4.2). 7/83

CO (10 to 12 mg) delivery increased due to decreased filter ventilation (37 to 23%) - higher filter RTD (3.0 to 4.2 in. H₂O) correlated with higher efficiency (48 to 54%). 1/84

A. AMERICAN BRANDS (continued)PALL MALL LIGHT MENTHOL 100'S

Introduced - 13 mg tar and 1.1 mg nicotine - Blend contains 12% expanded tobacco and 12% expanded stems. Cigarette has mechanically perforated cigarette paper and no ventilation. 4/79

PINNACLE 85

New 85 mm cigarette with 25 mm geometrically shaped filter similar to that on Vantage (RJR); however, filter is reversed. 9/70

PINNACLE MENTHOL 85

Test marketed - king size - dual filtered mentholated - tobacco blend markedly different. 4/65

SAFARI 100

Test marketed - 100 mm cigarette with 25 mm CA filter. New type package - pouch pack with fin seals. 11/73

SILVA THINS 100

100 mm cigarette with 20 mm CA filter; small circumference (22 mm) and 26% reconstituted material. 9/67

Reconstituted tobacco decreased (26 to 13%) and paper porosity increased - No change in smoke deliveries. 5/68

Blend changed as indicated by higher alkaloids and a markedly lower reducing sugar - The nicotine delivery (0.1 mg) was increased by this change. 7/70

Expanded stem added to blend at 10% level and reconstituted tobacco content reduced 18 to 11% - Filter changed from 20 mm paper to 25 mm CA. Lower tobacco weight and rod density noted. Tar decreased (2 mg). 2/72

Expanded stem content increased (10 to 16%). 3/73

Lower tar (16 to 12 mg) and nicotine (1.2 to 1.1 mg) deliveries resulting from introduction of filter ventilation (30%). Increases in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) were also noted. 8/77

The addition of 4% ET - ES increased from 8 to 16% resulting in a lower tobacco weight. 5/82

2050082025

A. AMERICAN BRANDS (continued)SILVA THINS MENTHOL 100

100 mm cigarette with small circumference - Similar to Silva Thins Plain in all characteristics except for menthol. 8/68

Blend changed as indicated by higher alkaloids and lower reducing sugars. Filler rod TPM increased (2 mg) and tar delivery increased (1 mg). 9/71

Filter length increased 20 to 25 mm - No change in smoke deliveries. 5/74

Lower tar (15 to 12 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from introduction of filter ventilation (30%). Increases in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) were also noted. Introduced expanded stem at 3% level. 8/77

Lower tar (12 to 7 mg) and nicotine (1.0 to 0.8 mg) deliveries correlating with a more efficient filter and a lower filler rod TPM. 5/79

Tar (7 to 11 mg) and nicotine (0.8 to 1.0 mg) increased by a decrease in filter ventilation. 8/79

Changed the filter from 27 mm paper to 27 mm CA - Tar (11 to 12 mg) and nicotine (0.9 to 1.1 mg) increased as result of less efficient filter. 5/80

The addition of 4% ET - ES increased from 8 to 16% resulting in a lower tobacco weight. 5/82

SUPER M MENTHOL 100

Test marketed - 100 mm mentholated cigarette in new air tight hermetically sealed "polyfoil pak" - Same pack as used on Safari 100. 5/74

SWEET CAPORAL 85

Introduced - king size with 20 mm CA filter. 10/65

TALL 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter - White stripped cigarette paper - Tar (19 mg) and nicotine (1.4 mg) deliveries. 8/75

Tar (18 to 21 mg), nicotine (1.6 to 1.7 mg), and CO (20 to 21 mg) increased - ventilation reduced (36 to 30%). 9/83

2050082026

A. AMERICAN BRANDS (continued)TALL MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter -
White striped cigarette paper - Tar (19 mg) and nicotine
(1.4 mg) deliveries. 8/75

Tar (18 to 20 mg), nicotine (1.6 to 1.7 mg), and CO
(17 to 21 mg) increased - ventilation decreased (38 to
31%). 9/83

TAREYTON 85

Paper component now being used, identified as chloride type. 4/63

TPM reduced by 3 mg - Nicotine delivery decreased by 0.1 mg.
Total and filter RTD increased. 6/63

TPM and nicotine reduced (4 mg and 0.1 mg) - Change in
paper component and porosity. 2/64

Fiber shape changed, I to cloverleaf. 8/64

Fiber denier changed, 5.0 to 4.0. 11/64

Fiber shape changed, cloverleaf to I. 5/65

Reconstituted tobacco content increased (10 to 14%). 10/65

Tipping paper increased 19 to 24 mm, paper porosity
increased - TPM unchanged. 2/67

TPM (1 mg) decreased as result of change in filter length -
Paper porosity decreased 14 to 20 seconds. 4/67

Reconstituted tobacco decreased 20 to 15%. 10/69

Addition of 3% ES to blend. 4/75

Tar decreased (19 to 17 mg) resulting from a change to a
more porous cigarette paper. 7/76

Freon expanded tobacco introduced to the blend at the 9%
level resulting in a lower tobacco weight. Change resulted
in lower tar (16 to 14 mg) and nicotine (1.2 to 1.0 mg)
deliveries. 8/78

Lower tar (15 to 13 mg) correlating with a higher RTD for
the inner paper filter. 5/79

2050082027

A. AMERICAN BRANDS (continued)TAREYTON LIGHTS 85

Test marketed - an 85 mm low tar (8 mg) and nicotine (0.6 mg) cigarette. 27 mm dual filter with filter ventilation (44%) consisting of 17 mm CA outer filter and 10 mm paper inner filter. Inner filter contains carbon granules. Longest filter of any 85 mm cigarette on the market.

1/77

Tar (7 to 4 mg) and nicotine (0.7 to 0.3 mg) decreased resulting from an increase in filter ventilation and lower tobacco weight. Lower tobacco weight result of the addition of expanded tobacco (32%).

2/80

TAREYTON MENTHOL 85

Introduced on test market - Low delivery (7 mg tar and 0.6 mg nicotine), mentholated brand similar in most characteristics to Tareyton Lights 85 previously introduced. Contains no charcoal in filter.

9/77

TAREYTON 100

Introduced - 100 mm 20 mm dual filter.

4/67

TPM (2 mg) decreased as result of changing paper porosity.

5/67

Tar (2 mg) and nicotine (0.2 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm).

10/67

Filter length (20 to 25 mm) increased, no changes in smoke deliveries.

9/68

Tar (2 mg) and nicotine (0.1 mg) increased correlating with a reduction in filter efficiency.

11/70

Tar (2 mg) increased - Higher filler rod TPM and puff count.

12/71

Filter length (25 to 27 mm) and tipping paper (30 to 32 mm) increased. Lower tar (1 mg) noted.

10/73

Addition of 3% ES to blend.

4/75

Tar (19 to 17 mg) and nicotine (1.4 to 1.3 mg) decreased resulting from a change to a more porous cigarette paper.

7/76

Lower tar (17 to 15 mg) and nicotine (1.3 to 1.2 mg) deliveries resulting from decrease in filler rod TPM delivery.

5/78

Freon expanded tobacco introduced to the blend at the 9% level resulting in a lower tobacco weight. Change resulted in lower tar (15 to 13 mg) and nicotine (1.2 to 1.0 mg) deliveries.

8/78

2050082028

A. AMERICAN BRANDS (continued)TAREYTON LONG LIGHTS 100

Introduced - 100 mm low tar (8 mg) and nicotine (0.7 mg) cigarette. 27 mm dual filter with filter ventilation (37%) consisting of 17 mm CA outer filter and 10 mm paper inner filter. Inner filter contains carbon granules. Blend contains 7% expanded tobacco.

1/78

Tar (9 to 7 mg) and nicotine (0.8 to 0.7 mg) decreased resulting from an increase in filter ventilation (30 to 47%).

8/79

TAREYTON ULTRA LOW TAR MENTHOL 85

Test marketed - These new cigarettes deliver 2 mg tar and 0.1 mg nicotine - 25 mm CA filter with 75% ventilation and blend containing 34% expanded tobacco.

3/79

TENNYSON MENTHOL 85

Introduced - king size mentholated - carbon portion of dual filter has no gas phase activity.

10/65

TENNYSON MENTHOL 100

100 mm mentholated cigarette - menthol contained in gelatin capsules which release menthol when filter is pinched - similar filter to that in Waterford.

10/67

TWIST 100

Test marketed - 100 mm cigarette with lemon and menthol flavoring. Blend contains 10% expanded stems.

6/73

WATERFORD 80

Introduced - long size in crush proof box - novel filter containing two types of capsules in addition to charcoal - One of the capsule types contains water.

9/65

WATERFORD 85

Introduced - king size in soft pack - novel filter contains only one type capsule containing water - Charcoal also present.

2/66

WHITE LEAF 85

Test marketed - 85 mm filter cigarette with bleached all tobacco wrapper instead of cigarette paper.

6/67

2050082029

B. BROWN AND WILLIAMSON TOBACCO COMPANYARCTIC LIGHTS 85

Test marketed - 85 mm cigarette delivering 9 mg tar and 0.7 mg nicotine. High alkaloid blend containing 14% expanded stems - 25 mm CA filter with 33% ventilation.

9/78

ARCTIC LIGHTS 100

Test marketed - 100 mm cigarette delivering 10 mg tar and 0.8 mg nicotine. High alkaloid blend containing 14% expanded stems - 27 mm CA filter with 39% ventilation.

9/78

AVALON 85

Introduced - test market - king size, triple filter, in soft pack.

7/63

BARCLAY 80 (BOX)

Test marketed - ultra low tar (3.2 mg) - 27 mm CA filter containing 64% ventilation-blend contains 11% reconstituted tobacco, 18% expanded tobacco and 11% expanded stems.

10/80

Tar (3.0 to 1.3 mg), nicotine (0.17 to 0.08 mg) and CO (3.0 to 1.2 mg) reduced as result of increase in filter ventilation (66 to 84%) - rows of (MP) holes increased (2 to 3) - elimination of reconstituted tobacco, expanded stems - increase in expanded tobacco (17 to 36%) - lower tobacco weight (0.582 to 0.520 g) - increase in total alkaloids (1.71 to 2.67%).

2/81

BARCLAY 85

Test marketed - ultra low tar (2.5 mg) - 27 mm CA filter with 77% filter ventilation-blend contains 32% expanded tobacco and no reconstituted tobacco or expanded stems.

9/80

BARCLAY MENTHOL 85

Introduced - nationally - 85 mm mentholated cigarette. Tar (1.4 mg) and nicotine (0.11 mg) - filter ventilation is achieved by a system of mechanical perforation and four longitudinal grooves along the filter. These cigarettes are similar in most characteristics to Barclay 85.

7/81

BARCLAY 100

Test marketed - ultra low tar (3.5 mg) - 27 mm CA filter with 69% filter ventilation-blend contains 26% expanded tobacco, 6% reconstituted tobacco and 12% expanded stems.

9/80

2050082030

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)BARCLAY MENTHOL 100

Introduced - nationally - 100 mm mentholated cigarette. Tar (3.4 mg) and nicotine (0.28 mg) - filter ventilation is achieved by a system of mechanical perforation and four longitudinal grooves along the filter. These cigarettes are similar in most characteristics to Barclay 100.

7/81

BELAIR 85

Introduced - king size recessed filter, mentholated.

6/60

Lighter filter.

6/62

Flush-type filter.

6/62

TPM reduced, and paper porosity increased - Carbowax (5%) observed in the filter.

12/63

Filler alkaloids increased resulting in higher nicotine delivery.

1/64

Change in paper component, phosphate to citrate.

3/64

TPM reduced (2 mg).

8/64

Filler change reduced nicotine delivery by reducing total alkaloids.

9/64

Fiber shape changed from cloverleaf to X-shape.

3/66

TPM (1 mg) increased.

5/66

TPM (4 mg), nicotine (0.2 mg), and menthol in smoke (0.1 mg) decreased as result of change in paper porosity.

1/67

TPM (2 mg) decreased as result of blend change.

8/67

Tar (2 mg) reduced by increase in filter efficiency; fiber shape changed X to Y-shape.

3/68

Tar (1 mg), nicotine (0.2 mg), and menthol (0.5 mg) deliveries were reduced by changes in filter length (20 to 21 mm) and tipping paper (24 to 25 mm).

7/68

Reconstituted tobacco (7 to 11%) and RKS (12 to 16%) increased.

4/70

Addition of expanded RKS to blend replacing portion of regular RKS.

2/72

Lower total alkaloids (0.2%) and nicotine delivery (0.2 mg).

5/73

Tipping paper length increased 25 to 26 mm - No other changes.

7/73

Menthol in smoke content increased by increasing filler menthol.

3/76

Filler alkaloids and total reducing sugars were lower.

Nicotine delivery reduced by 0.1 mg.

5/76

Lower tar delivery (15 to 13 mg) resulting from a change to a more porous, mechanically perforated cigarette paper.

8/77

Lower tar (13 to 12 mg) due to decrease in filler rod TPM delivery.

5/78

2050082031

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)BELAIR 85 (continued)

The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD. 10/78

Lower tar (12 to 8 mg) and nicotine (0.9 to 0.8 mg) deliveries resulting from the introduction of filter ventilation (26%) and an increase in tipping paper length (26 to 30 mm). 1/79

Tar (9 to 10 mg), nicotine (0.76 to 0.82 mg) and filler rod TPM (26.3 to 29.8 mg) increased resulting from less porous paper (7 to 15 sec.) with lower level of paper component (0.6 to 0.2%) - decreased total and filter RTD. 1/84

BELAIR 100

100 mm cigarette with 25 mm CA filter - Similar to Kool 100. 9/68

Coupon added to pack. 9/69

RKS decreased (17 to 13%). 10/69

Filter fiber shape changed - X-shape to Y-shape. 8/71

Addition of expanded RKS to blend replacing portion of regular RKS. 2/72

Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (2 mg) and nicotine (0.1 mg) decreased. 12/72

Lower total alkaloids (0.1%) and nicotine delivery (0.1 mg). 5/73

Menthol in smoke content increased by increasing filler menthol. 3/76

Lower tar delivery (16 to 14 mg) resulting from a change to a more porous, mechanically perforated cigarette paper. 8/77

Lower tar (14 to 13 mg) due to decrease in filler rod TPM delivery. Lower tobacco weight and rod density were also noted. 5/78

The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD. 10/78

Lower tar (13 to 8 mg) and nicotine (1.0 to 0.7 mg) deliveries resulting from the introduction of filter ventilation (33%) and an increase in tipping paper length (32 to 36 mm). A change to a less porous paper (7 to 12 seconds) and the removal of expanded tobacco in the blend was noted. 1/79

Addition of 10% expanded tobacco resulted in a lower tobacco weight and rod density. Tar (7 to 8 mg) and CO (10 to 11 mg) increased as a result of a decrease in filter ventilation (37 to 24%). 11/80

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight. 3/81

Tar (10.2 to 8.8 mg), nicotine (0.81 to 0.74) and CO (12.0 to 10.2 mg) decreased - increased ventilation (25 to 34%). 9/82

Tar (9.2 to 7.5 mg), nicotine (0.67 to 0.58 mg), CO (8.0 to 6.6 mg) and menthol (0.38 to 0.32 mg) decreased - increased ventilation (36 to 45%). 5/84

2050082032

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)BREEZE 85

Introduced - test market - king size mentholated, in soft pack - similar to Kool. 5/63

CAPRI LONGS 100

100 mm mentholated cigarette with 22 mm CA filter - Lower smoke menthol than Kool 100. 9/67

Filter length (22 to 25 mm) and tipping paper length (27 to 30 mm) increased - Paper porosity changed (21 to 10 seconds) - No change in tar. 11/68

CAPRI 110

Introduced a new 110 mm cigarette 24.7 mm in circumference. Tar (19 mg) and nicotine (1.5 mg); 30 mm CA filter; 35 mm tipping paper. 3/75

CAPRI MENTHOL 110

Introduced a new 110 mm menthol cigarette 24.7 mm in circumference. Tar (19 mg) and nicotine (1.5 mg); 30 mm CA filter; 35 mm tipping paper. 5/75

CHEVRON 85

Introduced - test market - king size filter, in soft pack - similar to Viceroy. 3/63

CORONET 85 (NF)

Introduced - king size, nonfilter in new aluminum foil wrapper - similar to Raleigh plain end. 10/62

DOVER LONGS 100

Introduced - 100 mm cigarette with 22 mm CA filter. 2/67

Tar (4 mg) and nicotine (0.4 mg) reduced by changes in the filter and in the blend. 11/67

FACT 85

Test marketed - CA filter with a pocket in the middle containing yellowish granules identified as Duolite - Tar (14 mg) and nicotine (1.0 mg) deliveries. 7/75

Cigarette paper changed to mechanically perforated with citrate as paper component. Tipping paper increased from 30 to 32 mm. 4/76

Introduction of Hauni ventilation (20%) resulted in lower tar delivery (14 to 11 mg). 7/77

Re-introduced with new packaging and lower tar (9 mg) and nicotine (0.7 mg) deliveries. Lower deliveries accomplished using more efficient filter and higher level of ventilation (30%). Continues to utilize "Duolite" granules in filter. 9/77

2050082033

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)FACT MENTHOL 85

Menthol - test marketed CA filter with a pocket in the middle containing yellowish granules identified as Duolite. Tar (13 mg) and nicotine (0.9 mg) deliveries. Cigarette paper - mechanically perforated with citrate as paper component.

4/76

Introduction of Hauni ventilation (30%) resulted in lower tar delivery (13 to 11 mg).

7/77

Re-introduced with new packaging and lower tar (9 mg) and nicotine (0.7 mg) deliveries. Lower deliveries accomplished using a more efficient filter and higher level of ventilation (30%). Continues to utilize "Duolite" granules in filter.

9/77

FLAIR 100

Plain - 100 mm slim cigarette with 27 mm CA filter.

2/70

FLAIR MENTHOL 100

Menthol - 100 mm slim cigarette with 27 mm CA filter.

2/70

HALLMARK 85

Plain - New cigarette designed to give uniform smoke deliveries from first puff to last puff - The cigarette paper is coated with sodium chlorate at evenly spaced intervals.

9/70

HALLMARK MENTHOL 85

Menthol - New cigarette designed to give uniform smoke deliveries from first puff to last puff - The cigarette paper is coated with sodium chlorate at evenly spaced intervals.

9/70

HALLMARK 100

Introduced - test market - packaged in a slide and shell box with an automatic top opening device and delivers 24 mg tar. Blend contains no reconstituted tobacco or expanded stems; filter contains modified ion exchange resin (Duolite).

7/76

HALLMARK MENTHOL 100

Introduced - test market - a mentholated version of Hallmark 100 cigarettes. Delivers 23 mg tar.

8/76

KENTUCKY KING 85

Introduced, king size. "All tobacco filter."

5/60

Phosphate treated paper.

3/61

Increased TPM and nicotine deliveries achieved by slower static burning and increased alkaloids.

2/62

2050082034

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)KOOL 80 (BOX)

Introduced in flip-top box - Similar to Kool 85. 5/74

KOOL 85

New filter, lower RTD. 6/60

Filter fiber denier and weight decreased, no change in filtration efficiency. 6/61

Filter length increased (17 to 20 mm); higher filter efficiency. 3/62

Carbowax (5%) observed in the filter. 12/63

Filler alkaloids increased resulting in higher nicotine delivery. 2/64

TPM (2 mg) and nicotine deliveries decreased as result of change in paper additive, phosphate to citrate. 3/64

Nicotine delivery decreased by decreasing filler alkaloids. 12/64

Filler alkaloids increased. 4/65

Fiber shape changed from I to Y. 3/66

TPM (1 mg) increased. 6/66

TPM (2 mg), nicotine (0.2 mg), and menthol in smoke (0.1 mg) decreased by increasing paper porosity. 10/66

TPM (2 mg) decreased as result of a blend change. 8/67

Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased, no change in smoke deliveries. 4/68

Tar (1 mg) and nicotine (0.1 mg) were reduced correlating with a lower filler rod TPM. 7/68

Menthol in smoke and filler increased. 1/69

Reconstituted tobacco (8 to 12%) and RKS (11 and 15%) increased. 4/70

Addition of expanded RKS to blend replacing portion of regular RKS. 2/72

Tar (0.6 mg) and nicotine (0.05 mg) lower due to faster static burning time. 10/72

2050082035

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)KOOL 85 (continued)

Reconstituted tobacco increased 11 to 15%. 5/73

Tipping paper length increased 25 to 26 mm - No other changes. 7/73

Menthol in smoke content increased by increasing filler menthol. 3/76

KOOL INTERNATIONAL MENTHOL 95

Test marketed - This brand is packaged in the princess pack. Tar (10 mg). Ventilation consists of 1 row of Laser perforated holes. This cigarette previously available only in foreign markets. 8/79

KOOL MILDS 85

Introduced - Tar (16.5 mg) and nicotine (1.4 mg) - Very similar to Kool 85 except for total alkaloids. Regular and expanded RKS in blend (11%). 4/72

Marketed nationally in July, 1972, with longer filter (21 to 25 mm) and increased tipping paper length (25 to 30 mm). Increase of regular and expanded RKS (11 to 18%). These changes resulted in lower tar (3 mg) and nicotine (0.3 mg). 7/72

Lower total alkaloids (0.3%) and nicotine delivery (0.2 mg). 5/73

Blend change - Lower alkaloids and filler rod TPM resulting in lower tar (2 mg) and nicotine (0.2 mg). Lower puff count and higher RTD noted. 8/74

The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD. 10/78

A lower tar (13 to 11 mg) achieved by introduction of filter ventilation (15%) and a change to a more porous cigarette paper. A blend change indicated by a high filler alkaloid content and lower reducing sugars. 10/79

Expanded tobacco eliminated (11 to 0%) - increase in tobacco weight. 3/81

Freon expanded tobacco has been added (11%) resulting in lower tobacco weight (0.692 to 0.670 g). 7/81

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)KOOL MILDS 100

Test marketed - A brand extension of Kool Milds 85.
Tar (13 mg) and nicotine (1.2 mg) with 19% ventilation.
Blend contains 7% expanded tobacco. Ventilation achieved
by a band of electrostatic perforation. 8/79

Expanded tobacco eliminated (11 to 0%) - increase in
tobacco weight. 3/81

Freon expanded tobacco has been added (11%) resulting in
lower tobacco weight (0.884 to 0.829 g). 7/81

KOOL NATURALS 85

Introduced - test market - delivers 14 mg tar. Similar to
Fact 85 and Vanguard 85 cigarettes. Filter containing
Duolite granules described as an "Actron" filter. 8/76

KOOL 100

100 mm mentholated cigarette with 22 mm CA filter. 9/67

Changes in blend, filter length (22 to 25 mm), and
tipping paper (27 to 30 mm) did not alter smoke deliveries. 8/68

Menthol in smoke and filter increased. 1/69

Addition of expanded RKS to blend replacing portion of
regular RKS. 2/72

Change in filter length (25 to 27 mm) and tipping paper
length (30 to 32 mm) - Lower tar (1 mg) and nicotine
(0.1 mg). 2/73

Reconstituted tobacco content increased (11 to 15%). 5/73

Menthol in smoke content increased by increasing filler
menthol. 3/76

Lower tar (18 to 17 mg) resulting from decrease in filler
rod TPM delivery. An increase in total RTD was also
observed. 5/78

Level of reconstituted tobacco increased from 10 to 16%
and level of expanded stems decreased from 17 to 14%. 9/78

Lower tar (16 to 15 mg) and nicotine (1.2 to 1.1 mg)
deliveries resulting from a change to a more porous
cigarette paper (22 to 12 sec.). 12/78

The addition of 8% expanded tobacco was noted - This
change resulted in a lower tobacco weight and rod density 9/80

2050082037

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)KOOL LIGHTS 85

Name changed from Kool Super Lights 85. Ventilation system changed to two rows of mechanical perforation. These cigarettes are lower in tar (8.6 mg) because of a more efficient filter and higher ventilation level.

9/81

KOOL LIGHTS 100

Name changed from Kool Super Lights 100. Ventilation system changed to two rows of mechanical perforation. These cigarettes are lower in tar (12.3 mg) because of a more efficient filter and higher ventilation level.

9/81

Tar (11 to 10 mg), nicotine (0.9 to 0.8 mg) and CO (10 to 8 mg) decreased due to increased ventilation (28 to 38%).

5/83

KOOL SUPER LIGHTS 85

Introduced - 85 mm mentholated cigarette - low tar (9 mg) and nicotine (0.7 mg) resulted primarily from filter ventilation (25%) and low available TPM filler. Mechanically perforated cigarette paper. Typical Brown & Williamson blend. Tar (9 mg) and nicotine (0.8 mg) listed on pack.

7/77

Tar (9 to 6 mg) and nicotine (0.8 to 0.6 mg) deliveries were decreased by increasing the filter ventilation and lowering the tobacco weight. Lower tobacco weight result of addition of 6% expanded tobacco. Paper porosity changed from 7 to 13 seconds. Data listed on pack as tar (7 mg) and nicotine (0.7 mg).

7/79

KOOL SUPER LIGHTS 100

Introduced - 100 mm mentholated cigarette - low tar (9 mg) and nicotine (0.7 mg) achieved by filter ventilation (35%) and low available TPM filler. Typical Brown & Williamson blend. Tar (9 mg) and nicotine (0.8 mg) listed on pack.

7/77

Addition of 10% expanded tobacco resulted in a lower tobacco weight and rod density.

11/80

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on packs has been removed.

3/81

Tar (8.1 to 9.4 mg), nicotine (0.65 to 0.72 mg) and CO (9.9 to 12.2 mg) increase - reduced filter ventilation (32 to 24%).

4/81

KOOL ULTRA 85

Introduced - test market - tar and nicotine deliveries advertised as 2 mg and 0.3 mg, respectively. The filter system is similar to that of the Barclay with mechanical perforation and four longitudinal grooves along the filter.

9/81

2050082038

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)KOOL ULTRA 100

Introduced - test market - tar and nicotine deliveries are 5.7 mg and 0.53 mg, respectively. The filter system is similar to that of the Barclay with mechanical perforation and four longitudinal grooves along the filter.

9/81

LIFE 85

TPM (7 mg) and nicotine (0.5 mg) increased by decrease in filter efficiency - Filter changed from 25 mm paper to 25 mm CA.

2/66

TPM (5 mg) and nicotine (0.3 mg) decreased as a result of increase in filter efficiency. Filter changed from 25 mm CA to dual filter 12.5 mm CA and 12.5 mm paper.

12/66

TPM (2 mg) decreased as result of increased filter efficiency - Filter changed to an 18 mm/7 mm (paper/CA).

2/67

TPM (4 mg) and nicotine (0.2 mg) increased as result of a change in filter construction 12.5/12.5 mm (paper/CA) which resulted in decrease in filter efficiency.

3/67

LIFE FILTER 100

Lowest tar delivery of any 100 mm - Dual filter, paper inner plug, and cellulose acetate outer plug - Tar (10 mg) and nicotine (0.8 mg) data are listed on pack.

6/70

Filter changed from 25 mm dual (paper/CA) to 27 mm CA. Total and filter RTD increased.

8/73

LYME 85

New flavor - lime-menthol product - Tar (14 mg) and nicotine (0.9 mg) low for B & W product.

10/71

PHOENIX 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper containing azo dyes - Circumference 21 mm - Tar (19 mg) and nicotine (1.4 mg) deliveries.

7/75

2050082039

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)PHOENIX MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper containing azo dyes - Circumference 21 mm - Tar (19 mg) and nicotine (1.4 mg) deliveries.

7/75

RALEIGH FILTER 85

Lighter filter with same efficiency.

4/61

Carbowax (5%) observed in the filter.

12/63

Filler alkaloids increased resulting in higher nicotine delivery.

1/64

TPM (4 mg) and nicotine (0.2 mg) decreased as result of change in paper component, phosphate to citrate.

6/64

Fiber shape changed from I to Y.

3/66

TPM (2 mg) increased.

6/66

TPM (2 mg) decreased, paper porosity increased and cigarette length decreased.

2/67

Reconstituted tobacco increased, 6 to 9%.

3/67

Tar (1 mg) reduced by changes to a more porous paper and in tipping paper (24 to 25 mm).

4/68

Filter length increased (20 to 21 mm).

7/68

Reconstituted material increased, 5 to 9%.

9/68

Paper porosity changed (11 to 17 seconds) - No change in tar.

1/69

Tar (2 mg) and nicotine (0.2 mg) decreased, lower alkaloids and tobacco weight observed.

8/69

RKS increased (7 to 18%).

10/69

Addition of expanded RKS to blend replacing portion of regular RKS.

3/72

Tipping paper length increased 25 to 26 mm - No other changes.

7/73

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on pack has been removed.

3/81

Tobacco weight decreased (0.778 to 0.732 g) due to addition of 4% Freon expanded tobacco to the blend.

11/83

2050082040

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)RALEIGH LIGHTS 85

Introduced - 85 mm version of Raleigh 85 with lower tar (13 mg) and nicotine (0.9 mg). It has 25 mm CA filter and 30 mm tipping paper. 4/73

Brand name changed from Raleigh Extra Milds 85 to Raleigh Lights 85. No other changes were noted. 10/76

Decrease in tar delivery (12 to 10 mg) resulting from introduction of filter ventilation (24%) and a change to a more efficient filter. Changed to a high alkaloid blend and replaced mechanically perforated cigarette paper with inherently porous paper. 4/78

Tar (9 to 8 mg) and nicotine (0.9 to 0.8 mg) deliveries lower correlating with a lower filler rod TPM. 3/79

12% Freon expanded tobacco added to blend. 5/83

RALEIGH LIGHTS 100

Introduced - 100 mm version of Raleigh Lights 85 with 10 mg tar and 0.9 mg nicotine. 27 mm CA filter with 24% ventilation. 8/78

Tar (7.8 to 9.8 mg), nicotine (0.68 to 0.81 mg) and CO (10.7 to 14.4 mg) increased - decrease in filter ventilation (34 to 19%) - higher RTD (4.9 to 5.6). 2/81

Tar (10 to 9 mg), nicotine (0.9 to 0.8 mg) and CO (13 to 11 mg) decreased due to increased ventilation (26 to 32%). 5/83

12% Freon expanded tobacco added to blend resulting in lower tobacco weight (0.892 to 0.826 g/cc) and rod density (0.251 to 0.230 g/cc). Fiber denier changed (2.6/Y to 3.2/Y) resulting in lower filter RTD (4.1 to 3.3 in. H₂O) - decrease in filtration efficiency (59 to 52%). Tar increased (9 to 10 mg). 1/84

RALEIGH 100

100 mm cigarette with 25 mm CA filter. 8/69

Coupon on pack. 9/69

Tar (1 mg) increased correlating with a change in paper porosity (13 to 25 seconds). 3/71

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

Tar (1.5 mg) and nicotine (0.1 mg) lower - Lower tobacco weight and rod density noted. 5/72

Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (1 mg) and nicotine (0.1 mg) decreased. 12/72

Lower tar (17 to 16 mg) resulting from decrease in filler rod TPM delivery. 5/78

Addition of expanded tobacco at the 6% level correlating with a lower tobacco weight and rod density. Lower tar (17 to 16 mg) and filler rod TPM deliveries noted. 4/79

2050082041

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)RALEIGH 100 (continued)

Lower tar (16 to 15 mg) and nicotine (1.2 to 1.1 mg) resulting from a change to a more porous cigarette paper. 1/80

Tar (7.8 to 9.8 mg), nicotine (0.68 to 0.81 mg) and CO (10.7 to 14.4 mg) increased - decrease in filter ventilation (34 to 19%) - higher RTD (4.9 to 5.6). 2/81

Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on pack has been removed. 3/81

4% Freon expanded tobacco added to blend resulted in lower tobacco weight (0.886 to 0.831 g) and rod density (0.250 to 0.233 g/cc). 1/84

RICHLAND 85

Introduced - contains 25 cigarettes per pack - delivers 15 mg tar and 1.2 mg nicotine - similar to Viceroy 85. 9/83

RICHLAND MENTHOL 85

Introduced - contains 25 cigarettes per pack - delivers 15 mg tar, 1.1 mg nicotine, and 0.5 mg menthol - similar to Kool 85. 9/83

SEVENTY 70

Plain - test marketed with mechanically perforated cigarette paper and 17 mm CA filter - 10 mg tar and 0.7 mg nicotine. 6/76

SEVENTY MENTHOL 70

Menthol - test marketed with mechanically perforated cigarette paper and 17 mm CA filter - 10 mg tar and 0.7 mg nicotine. 6/76

SPIRIT 85

Test marketed - 85 mm cigarette delivering 8 mg tar and 0.9 mg nicotine - This new brand has a high efficiency, 25 mm CA filter with 30% ventilation. 10/78

SPIRIT 100

Test marketed - 100 mm cigarette delivering 9 mg tar and 1.0 mg nicotine - This new brand has a high efficiency, 27 mm CA filter with 27% ventilation. 10/78

SUEDES 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper colored with azo dyes - Tar (17 mg) and nicotine (1.2 mg) deliveries - Circumference 21 mm. 9/75

2050082042

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)SUEDES MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper colored with azo dyes - Tar (19 mg) and nicotine (1.3 mg) deliveries - Circumference 21 mm.

9/75

TRAMPS 85

Plain - Introduced - Light brown cigarette paper colored with caramelized sugar. Tar (19 mg) and nicotine (1.1 mg) deliveries.

9/74

Introduced with regular cigarette paper. Lower tar and nicotine deliveries than previous sample.

10/74

Tar (19 to 16 mg) and nicotine (1.3 to 1.1 mg) decreased. Filler rod TPM decreased (36 to 31 mg). Smoke deliveries change as result of paper change.

4/75

TRAMPS MENTHOL 85

Menthol - Introduced - Light brown cigarette paper colored with caramelized sugar. Tar (19 mg) and nicotine (1.1 mg) deliveries.

9/74

Introduced with regular cigarette paper. Lower tar and nicotine deliveries than previous sample.

10/74

Tar (19 to 17 mg) and nicotine (1.1 to 1.0 mg) decreased. Smoke deliveries change as result of paper change.

4/75

TRAMPS 110

Introduced plain 110 mm cigarette with light brown cigarette paper colored with caramelized sugar. Circumference 24.6 mm, 30 mm CA filter, and 35 mm tipping paper.

4/75

TRAMPS MENTHOL 110

Introduced menthol 110 mm cigarette with light brown cigarette paper colored with caramelized sugar. Circumference 24.6 mm, 30 mm CA filter, and 35 mm tipping paper.

4/75

VANGUARD 85

Introduced - Similar to Fact 85 cigarettes previously introduced - CA filter with pocket in the middle containing yellowish granules identified as Duolite - Tar (14 mg) and nicotine (1.0 mg) deliveries.

8/75

2050082043

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)VANGUARD MENTHOL 85

Introduced - test market - mentholated version of Vanguard 85 - Delivers 14 mg tar. 7/76

VICEROY 85

"Deep Weave," more efficient filter. 8/60

Lighter, slightly less efficient filter resulted in slight increase in TPM and nicotine delivery. 6/61

Total RTD reduced 20 mm H₂O by changes in plug RTD, rod circumference, tobacco weight, and paper porosity. 8/62

Filter contains carbowax (5%). 5/63

Filter length has increased from 17 to 20 mm. 8/63

Filler alkaloids increased resulting in a higher nicotine delivery. 1/64

TPM (3 mg) and nicotine deliveries decreased, a result of a more porous cigarette paper. 2/64

TPM (2 mg) increased. 6/66

TPM (2 mg) decreased as result of blend change. 8/67

TPM (1 mg) reduced by changes to a more porous paper and in tipping paper (24 to 25 mm). 4/68

Reconstituted material increased, 6 to 9%. 9/68

Tar increased (1 mg) - Change in paper porosity (11 to 18 seconds) noted. 5/69

Tar (1 mg) and nicotine (0.1 mg) decreased, amount of paper component in cigarette paper increased. 7/69

RKS increased (11 to 14%). 10/69

RKS increased (13 to 18%). 10/70

Addition of expanded RKS to blend replacing portion of regular RKS. 3/72

Tipping paper length increased 25 to 26 mm - No other changes. 7/73

2050082044

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)VICEROY 85 (continued)

Package design change - Tar (15 to 17 mg) and nicotine (1.0 to 1.1 mg) deliveries increased. Blend change observed. 6/75

Tar (15.0 mg) and nicotine (1.0 mg) deliveries returned to level prior to package design change. 10/75

Lower tar (16 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries achieved by change to a more efficient filter. Changes in total and filter RTD and filter fiber denier also noted. 3/78

Addition of expanded tobacco at the 6% level was observed. First time a Brown & Williamson product containing expanded tobacco was obtained from the market. Decrease in tobacco weight along with lower tar (14 to 13 mg) and nicotine (1.0 to 1.9 mg) deliveries resulting from the addition of expanded tobacco. 9/78

Tar increased (13.8 to 14.7 mg) due to decreased filtration efficiency (48 to 40%) and change in fiber denier (3.0 to 3.7). 3/83

VICEROY EXTRA MILD 85

Introduced - Very similar to Viceroy Lights 85 previously test marketed by Brown & Williamson. 4/74

Tar (14 to 11 mg) and nicotine (1.0 to 0.8 mg) decreased by the introduction of Hauni ventilation at the 23% level. A decrease in total RTD was also noted. 1/77

Blend change resulting in higher filler rod TPM delivery. Changed to a more efficient filter and discontinued use of mechanically perforated cigarette paper. No change in tar or nicotine deliveries observed. Changed from Hauni ventilation to mechanically perforated tipping paper. 4/78

VICEROY LIGHTS 85

Introduced - Tar (12.5 mg) and nicotine (1.0 mg), 25 mm CA filter - 30 mm tipping paper - Blend contains expanded RKS. 4/72

VICEROY RICH LIGHTS 85

Introduced - Tar (9 mg) and nicotine (0.8 mg) with a 25 mm CA filter and 36% ventilation. Similar to Viceroy Extra Milds 85 cigarettes. 8/78

12% Freon expanded tobacco added to blend. 5/83

2050082045

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)VICEROY 100

100 mm cigarette with 22 mm CA filter. 10/67

Tar (2 mg) and nicotine (0.1 mg) reduced by changes in filter length (22 to 25 mm), tipping paper (27 to 30 mm) and to a more porous paper (20 to 12 seconds). 8/68

Tar (1 mg) increased. Change in paper porosity (11 to 20 seconds) noted. 5/69

Tar (2 mg) and nicotine (0.2 mg) decreased, change in paper porosity (21 to 14 seconds). 6/69

RKS increased (11 to 14%). 10/69

Tar (2 mg) and nicotine (0.1 mg) were reduced correlating to lower filler rod TPM - A decrease in alkaloids and higher reducing sugars were observed - An increase in RKS was noted. 9/70

RKS increased (13 to 18%). 10/70

Tar (1 mg) increased correlating with change in paper porosity (12 to 22 seconds). 3/71

Addition of expanded RKS to blend replacing portion of regular RKS. 3/72

Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (2 mg) and nicotine (0.2 mg) decreased. 12/72

Package design change. Tar (16 to 17 mg) and nicotine (1.1 to 1.2 mg) deliveries increased. Blend change observed. 6/75

Decrease in tar (18 to 16 mg) and nicotine (1.3 to 1.1 mg) deliveries resulting from a change to a more porous cigarette paper. 11/77

Addition of expanded tobacco at the 7% level correlated with lower tobacco weight and rod density. 5/80

Tar (14 to 16 mg), nicotine (1.0 to 1.1 mg), filler rod TPM (27 to 29 mg) and total alkaloids (1.60 to 1.72%) increased. 9% ventilation added to brand - CO decreased (16 to 14 mg). 3/84

2050082046

B. BROWN AND WILLIAMSON TOBACCO COMPANY (continued)VICEROY RICH LIGHTS 100

Introduced - 100 mm cigarette delivering 8 mg tar and 0.8 mg nicotine. 27 mm CA filter with 40% ventilation. This is a brand extension of Viceroy Rich Lights 85 cigarettes.

9/78

Tar value (8 to 9 mg) changed on pack to comply with FTC Report.

5/82

12% Freon expanded tobacco added to blend.

5/83

WINGS FILTER 85

85 mm cigarette - 20 mm CA filter - contains 25% reconstituted material.

3/67

2050082047

C. LIGGETT GROUPADAM 85

Introduced with 20 mm CA filter - Brown colored cigarette paper - paper colored with caramelized sugar. 7/71

Paper component in cigarette paper changed from citrate to phosphate - Tar (3 mg) and nicotine (0.3 mg) deliveries increased by this change. Package also redesigned. 10/72

ADAM 100

100 mm version of the 85 mm cigarette previously introduced - 25 mm CA filter. 10/72

CHESTERFIELD 70 (NF)

Paper porosity increased reducing TPM by 4 mg and nicotine delivery by 0.1 mg. 10/62

Alkaloids reduced by 0.1%. 12/62

Tar (22.7 to 19.4 mg), nicotine (1.36 to 1.14 mg) and CO (12.9 to 11.0 mg) reduced - change to more porous cigarette paper (22 to 14 sec.). 2/81

Tar (19 to 18 mg) decreased due to use of perforated porous cigarette paper (7 sec.) with higher level of paper component (0.3 to 1.7%). 1/84

CHESTERFIELD 101

Test marketed - 101 mm long cigarettes with 20 mm CA filter. 8/67

Tar (2 mg) reduced by increase in tipping paper (24 to 27 mm). 2/68

Tar (3 mg) reduced by changes in blend and to a more porous paper (20 to 11 seconds). 7/68

Coupon added to pack. 4/69

Reconstituted tobacco removed from blend (20 to 0%) - RKS increased (5 to 11%). 10/69

Reconstituted tobacco added to blend (0 to 19%) - RKS lowered (11 to 6%) - Tar (3 mg) and nicotine (0.2 mg) decreased. 6/70

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. Fiber denier change - No change in smoke deliveries. 7/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

2050082048

C. LIGGETT GROUP (continued)CHESTERFIELD 101 (continued)

Package changed to be similar to package of Chesterfield nonfilter.	10/74
Fiber shape changed (Y to I).	3/75
Tar (1 mg) lowered by increasing filter and tipping paper lengths. Fiber denier changed from 4.5 to 3.5.	1/76
Brand name changed from Chesterfield 101 to Chesterfield Filter Longs; cigarette length decreased (100.5 to 98.6 mm). Lower tar (1 mg) and nicotine (0.2 mg) deliveries were noted. Expanded stem level increased from 4 to 10%.	9/76
Brand name changed back to Chesterfield 101. Cigarette length and smoke deliveries returned to previous level.	11/76
An increase in the filter length (27 to 30 mm) and tipping paper length (32 to 35 mm) resulted in lower tar (15.3 to 14.1 mg), nicotine (1.10 to 1.04 mg), and CO (16.6 to 15.5 mg) deliveries.	8/81

CHESTERFIELD FILTER 85

Introduced - King size soft pack - slow burning rate resulting in high TPM and nicotine deliveries.	4/66
Coupon added to pack.	4/69
Package changed - Similar to Chesterfield nonfilter.	1/75
Lower tar (18 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from a change to a more porous cigarette paper and a decrease in tobacco weight.	7/78
Tar (14 to 12 mg), nicotine (1.0 to 0.9 mg), and CO (14 to 12 mg) decreased due to increased filter length (21 to 25 mm) and tipping paper length (26 to 30 mm).	9/83

CHESTERFIELD MENTHOL FILTER 85

Introduced - king size in soft pack - slow burning rate resulting in high TPM and menthol deliveries.	4/66
TPM (3 mg), nicotine (0.1 mg), and menthol in smoke (0.1 mg) decreased as result of changes in cigarette paper and filter efficiency.	3/67
Coupon added to pack.	4/69
Addition of reconstituted tobacco (0 to 19%), RKS decreased (15 to 3%) - Tar (3 mg) and nicotine (0.1 mg) decreased.	6/70

2050082049

C. LIGGETT GROUP (continued)CHESTERFIELD 85 (NF)

Paper porosity increased, reducing TPM by 8 mg and nicotine delivery 0.3 mg. 10/62

RTD increased (3.6 to 3.9 inches of H₂O). 8/65

TPM (2 mg) and nicotine (0.1 mg) deliveries increased. 12/65

Circumference reduced, resulting in lower tobacco weight. 5/67

Tar (3 mg) reduced by changes in type paper component, phosphate to citrate. 2/68

Coupon added to pack. 4/69

Tar (2 mg) and nicotine (0.1 mg) decreased - Reconstituted tobacco increased (6 to 11%) and RKS added to blend (4%). 9/71

Addition of expanded RKS to blend replacing a portion of regular RKS. 3/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density. 6/73

Expanded stem level increased from 4 to 10%. 9/76

Tar (24.8 to 23.7 mg), nicotine (1.59 to 1.45 mg) and CO (16.0 to 13.5 mg) reduced - change to a more porous cigarette paper (22 to 13 sec.). 1/81

Tar (23.0 to 20.2 mg) and CO (15.4 to 12.4 mg) decreased due to use of perforated cigarette paper that is more porous (14 to 7 sec.) with higher level of paper component (0.4 to 1.4%). 11/83

Tar (20 to 22 mg) and CO (12 to 16 mg) increased due to a change to a less porous paper (7 to 15 sec.) with decreased level of paper component (1.4 to 0.4%). 5/84

DECADE 85

Introduced - Test market - Lower tar (6 mg) and nicotine (0.5 mg) deliveries achieved by filter ventilation. Filter contains a 14 mm polyethylene tube insert similar to the one used on L & M Flavor Lights 85. 10/76

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries. 10/80

2050082050

C. LIGGETT GROUP (continued)DECADE MENTHOL 85

Introduced - low tar (6 mg) and nicotine (0.5 mg) achieved by high filter ventilation (59%). Has same filter and blend as Decade 85 cigarettes. Tar (5 mg) and nicotine (0.5 mg) listed on pack.

3/77

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries.

10/80

DECADE 100

Introduced - 100 mm cigarette - 5 mg tar and 0.4 mg nicotine with a 27 mm CA filter and 65% ventilation. High level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

8/78

DEVON 85

Introduced - King size mentholated cigarette with "Lark-type" filter - Filter has gas phase activity.

5/64

DORADO 85

Test market - New Mexico - delivers 14 mg tar and 1 mg nicotine.

7/83

DUKE 85

Dropped from C.I. History of Brand in C.I. 12/65.

1/66

EAGLE 85

Plain - test marketed - similar to L & M 85 cigarettes. Sell for 5¢ less per pack than any other 85 mm product.

1/76

EAGLE MENTHOL 85

Menthol - test marketed - similar to L & M 85 cigarettes. Sell for 5¢ less per pack than any other 85 mm product.

1/76

EVE LIGHT 100

Introduced 100 mm cigarette delivering 9 mg tar and 0.7 mg nicotine. 27 mm CA filter with 45% ventilation and a high level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

8/78

Replaced by Eve Slim Lights 100 (Box).

6/83

2050082051

C. LIGGETT GROUP (continued)EVE SLIM LIGHTS 100 (BOX)

Replaces Eve Light 100 - delivers 12 mg tar and 1 mg nicotine - 22.7 circumference.

6/83

EVE LIGHT MENTHOL 100

Introduced 100 mm menthol cigarette delivering 9 mg tar and 0.7 mg nicotine. 27 mm CA filter with 45% ventilation and a high level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

8/78

Replaced by Eve Slim Lights Menthol 100 (Box).

6/83

EVE SLIM LIGHTS MENTHOL 100 (BOX)

Replaces Eve Light Menthol 100 - delivers 12 mg tar and 1 mg nicotine - 22.7 circumference.

6/83

EVE 100

Plain - 100 mm cigarettes in new pack with floral design - Tipping paper also has floral design.

6/70

Addition of expanded RKS to blend replacing a portion of regular RKS.

3/72

Change in filter length (20 to 25 mm) and fiber denier (3.4 to 4.5) - Change in alkaloids, reducing sugars, and filler rod TPM - Lower tobacco weight and rod density noted.

4/72

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.

6/73

Cigarette length increased (97.8 to 98.7 mm).

10/74

Fiber shape changed (Y to I).

3/75

Design changed on tipping paper, package and carton.

5/75

Tipping paper length increased from 30 to 32 mm.

1/76

Tar (2 mg) and nicotine (0.1 mg) decreased by increasing filter length from 25 to 27 mm and increasing paper porosity.

3/76

Expanded stem level increased from 4 to 10%.

9/76

2050082052

C. LIGGETT GROUP (continued)EVE MENTHOL 100

100 mm cigarette in new pack with floral design - Tipping paper also has a floral design.	6/70
Addition of expanded RKS to blend replacing a portion of regular RKS.	3/72
Change in filter length (20 to 25 mm) and fiber denier (3.3 to 4.6). No change in smoke deliveries.	12/72
Reconstituted tobacco content increased (22 to 26%) - Resulted in lower total alkaloids, tar (1 mg) and nicotine (0.1 mg).	5/73
Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.	6/73
Fiber denier (3.4 to 4.5) and fiber shape (Y to I) changed. Filter weight increased. No change in smoke deliveries.	4/75
Design changed on tipping paper, package and carton.	5/75
Tipping paper length increased from 30 to 32 mm.	1/76
Tar (3 mg) and nicotine (0.1 mg) decreased by increasing filter length (25 to 27 mm) and increasing paper porosity. Menthol in smoke decreased (0.6 to 0.5 mg).	4/76
Expanded stem level increased from 4 to 10%.	9/76

EVE 120

Plain - test marketed - 21 mm circumference and filter ventilation of 50% - White cigarette paper and packaged in a crush-proof box.	3/76
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EVE MENTHOL 120

Menthol - test marketed - 21 mm circumference and filter ventilation of 50% - White cigarette paper and packaged in a crush-proof box.	3/76
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L & M 80 (BOX)

Introduced - delivers 25 mg tar.	12/57
Tobacco weight decrease.	12/62
Tobacco weight decrease (0.707 to 0.675 g) - tar decreased (16.5 to 14.3 g).	7/78
Tar decreased (13.2 to 12.4 mg) due to filter length increase (20 to 21 mm).	1/82

C. LIGGETT GROUP (continued)L & M 85

Citrate to phosphate paper.	10/60
Lighter, dull cellulose acetate filter on all sizes, no changes in efficiency.	9/60-3/61
Faster burning, more porous paper, reduced TPM (5 mg) and nicotine (0.2 mg).	9/62
Alkaloids reduced gradually.	9-12/62
TPM reduced by 1.5 mg - Alkaloids and nicotine delivery also reduced.	4/63
Filler alkaloids increased slightly and fiber denier changed from 2.5 to 2.0 on all sizes.	4/65
Fiber shape (cloverleaf to I) and fiber denier (2.0 to 2.3) changed.	9/65
TPM and nicotine deliveries increased - Filler alkaloids also increased.	12/65
TPM increased - less efficient filter resulting from change in fiber shape and denier.	4/66
Filter length increased, 17 to 20 mm.	10/66
Tar (2 mg) and nicotine (0.1 mg) decreased by lower filler rod TPM.	10/67
Tar (2 mg) and nicotine (0.1 mg) decreased by lower filler rod TPM.	12/67
Nicotine delivery (0.1 mg) increased by higher alkaloids.	7/70
Tar (1 mg) and nicotine (0.1 mg) decreased. Lower tobacco weight and rod density observed.	1/71
Addition of expanded RKS to blend replacing a portion of regular RKS.	3/72
Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.	6/73
Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased. Fiber denier (3.5 to 3.0) and fiber shape (Y to I) changed. Alkaloids decreased. Nicotine delivery lower (1.3 to 1.2 mg).	3/75
Tipping paper length increased from 25 to 26 mm.	1/76

2050082054

C. LIGGETT GROUP (continued)L & M 85 (continued)

Expanded stem level increased from 4 to 10%. 9/76

A change in paper component from phosphate to citrate reduced the tar (18 to 17 mg) and filler rod TPM (34 to 31 mg). Faster static burning time also noted. 2/77

Lower tar (17 to 15 mg) and nicotine (1.1 to 0.9 mg) deliveries resulting from decrease in tobacco weight and a more porous cigarette paper. Levels of expanded tobacco and expanded stems in blend were increased. 3/78

Increase in filter length (21 to 25 mm) and tipping paper (26 to 30 mm). Filter fiber denier (3.0/Y to 3.7/Y) and paper porosity (13 to 16 sec.) were changed. 12/81

Lower total RTD resulted due to change to mechanically perforated cigarette paper. Increased paper component. 3/83

L & M FLAVOR LIGHTS 85

Introduced - test market - Low tar (8 mg) and nicotine (0.6 mg) deliveries achieved by filter ventilation. Blend contains no reconstituted tobacco or added stem. Filter contains a 14 mm polyethylene tube originating at the tobacco rod end. 9/76

Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries. 10/80

L & M LONG LIGHTS 100

Test marketed - Low tar (8 mg) and nicotine (0.7 mg) deliveries achieved by filter ventilation (56%). Blend contains no reconstituted tobacco or added stem. 27 mm CA filter contains a polyethylene tube insert. Tar listed on package as "Only 8 mg tar." 3/77

Filter change by removing polyethylene tube insert and increasing fiber denier. No change in smoke deliveries. 10/80

Increase in filter length from (27 to 30 mm) and a change to a smaller fiber denier were noted. No change in smoke deliveries. 11/80

L & M LONG LIGHTS MENTHOL 100

Introduced - Tar (8 mg) and nicotine (0.8 mg) - Very similar in characteristics to L & M Long Lights 100. 6/80

Increase in filter length (27 to 30 mm). No change was observed in the smoke deliveries. 8/81

C. LIGGETT GROUP (continued)L & M 100

100 mm cigarette with 20 mm CA filter.	7/67
Tar (2 mg) and nicotine (0.2 mg) reduced by lower filler rod TPM.	10/67
Tar (1 mg) and nicotine (0.1 mg) reduced by a change to a more porous paper.	12/67
Tipping paper increased (24 to 27 mm), no change in smoke deliveries.	3/68
Nicotine delivery (0.1 mg) increased by higher alkaloids.	7/70
Tar (1 mg) and nicotine (0.1 mg) decreased. Lower tobacco weight and rod density observed.	1/71
Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. Fiber denier changed resulting in less efficient filter. Tar (1 mg) and nicotine (0.1 mg) increased.	5/71
Addition of expanded RKS to blend replacing a portion of tobacco weight and rod density.	3/72
Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.	6/73
Cigarette length decreased 100 to 99 mm.	9/73
Fiber shape changed (Y to I).	3/75
Tar (2 mg) decreased resulting from increased filter and tipping paper lengths. A more porous cigarette paper was also noted.	1/76
Expanded stem level increased from 4 to 10%.	9/76
Lower tar (17 to 15 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from decrease in tobacco weight and a change to a more porous cigarette paper. Levels of expanded tobacco and expanded stems in blend were increased.	3/78
Tar (14.3 to 13.2 mg) and nicotine (1.06 to 0.99 mg) reduced - increase in tipping paper length (32 to 35 mm).	2/81
Filter length increased (27 to 30 mm) - higher filter RTD (2.5 to 2.9) - decrease in tobacco weight (0.16 to 0.18 g).	6/81
11% Freon expanded tobacco added to blend.	6/83
Tobacco weight (0.754 to 0.700) and rod density (0.227 to 0.208 g/cc) decreased due to increased amount of freon expanded tobacco in the blend (17 to 28%).	7/83
Tar (13.2 to 12.4 mg) and CO (14.7 to 13.0 mg) deliveries decreased due to the use of perforated cigarette paper that is more porous (14 to 7 sec.) with a higher level of paper component (0.4 to 1.4%).	11/83

2050082056

C. LIGGETT GROUP (continued)L & M MENTHOL 100

Introduced - 100 mm mentholated cigarette with 20 mm
CA filter. 2/67

Tar (3 mg) decreased as tipping paper length was increased. 11/67

Nicotine delivery (0.1 mg) increased by higher alkaloids. 7/70

Tar (2 mg) and nicotine (0.1 mg) decreased correlating
with lower filler rod TPM. 11/71

Addition of expanded RKS to blend replacing a portion of
regular RKS. 3/72

Filter length (20 to 25 mm) and tipping paper (27 to 30 mm)
increased. No change in filter efficiency or smoke
deliveries. 10/72

Cigarette length decreased 100 to 99 mm. 9/73

Fiber shape changed (Y to I). 4/75

Lower tar (2 mg) and nicotine (0.1 mg) as result of increase
in filter length and tipping paper length. Lower tobacco
weight and reducing sugars content noted. 6/76

Expanded stem level increased from 4 to 10%. 9/76

Lower tar (17 to 15 mg) delivery observed. A change to
a more porous cigarette paper and a reduction in tobacco
weight were also noted. 7/78

L & M SUPERIOR 85

Test market - Texas - delivers 14 mg tar and 1 mg nicotine -
packaged in a black pack. 7/83

LARK 85

Introduced - king size in soft pack - new triple filter
containing special carbon granules with gas phase activity. 4/63

Carbon content increased. 4/64

TPM (2 mg) and nicotine (0.1 mg) deliveries decreased. 9/66

Fiber shape changed (I to Y) - no change in smoke deliveries. 1/68

Addition of expanded RKS to blend replacing a portion of
regular RKS. 3/72

Reduction in gas phase activity - lower carbon content. 3/72

Alkaloids and reducing sugars higher - Nicotine delivery
increased (0.1 mg). 5/72

205082057

C. LIGGETT GROUP (continued)LARK 85 (continued)

Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.	6/73
Tar delivery increased (2 mg) - Filler rod TPM increased indicating blend change.	4/74
Tar delivery (2 mg) decreased correlating with a lower filler rod TPM.	1/76
Tar increased (1 mg) correlating with an increase in filler rod TPM.	5/76
Expanded stem level increased from 4 to 10%.	9/76
Lower tar (17 to 15 mg) and nicotine (1.3 to 1.1 mg) deliveries resulting from a change to a more porous paper and a lower tobacco weight. An increase in expanded tobacco (5 to 7%) and a decrease in the reconstituted material (16 to 14%) correlated with the lower tobacco weight. Circumference decreased from 25.0 to 24.7 mm.	6/79
Tipping paper length increased (25 to 30 mm) - less porous cigarette paper (7 to 15 sec.) - Tar decreased (14.0 to 13.5 mg).	1/82
Filter length increased (20 to 25 mm) - outer plug of plug-space-plug increased - decrease in tobacco weight.	6/82

LARK 100

Introduced - 100 mm cigarette with CA-space-CA filter, with space containing approximately 88 mg of carbon.	9/68
Tar (1 mg) increased correlating to a change in paper porosity and slower static burning time.	4/71
Addition of expanded RKS to blend replacing a portion of regular RKS.	3/72
Alkaloids and reducing sugars higher - Nicotine delivery increased (0.1 mg).	5/72
Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.	6/73
Cigarette length decreased 100 to 99 mm.	9/73
Expanded stem level increased from 4 to 10%.	9/76
Increases in filter length (20 to 25 mm) and tipping paper length (28 to 30 mm) resulted in a slight reduction in tar delivery (18.7 to 18.2 mg). A lower tobacco weight was also noted.	9/77
Lower tar (18 to 16 mg) and nicotine (1.3 to 1.2 mg) deliveries resulting from a change to a more porous cigarette paper and a lighter tobacco weight. Increase in expanded tobacco (5 to 7%).	6/79
Tipping paper length increased (30 to 35 mm) - less porous cigarette paper (7 to 15 sec.) - decrease in tar (14.7 to 14.2 mg).	1/82
Tobacco weight (0.799 to 0.765 g) decreased - increased filter length (25 to 30 mm).	7/82

2050082058

C. LIGGETT GROUP (continued)LARK II 85

Test marketed - low tar (8 mg) and nicotine (0.5 mg) cigarette with a 25 mm CA filter with ventilation (47%). The CA filter has a pocket containing carbon granules (14 mg). Filter similar in construction to the ones used by Brown & Williamson on products containing Duolite granules in filters. Tar listed on pack as "Only 8 mg." 6/77

LARK LIGHTS 85

Test marketed - 85 mm cigarette delivering 8 mg tar and 0.6 mg nicotine - 25 mm CA filter containing charcoal granules with 40% ventilation. Blend contains 19% Freon expanded tobacco. 11/78

The elimination of filter ventilation resulted in an increase in tar (7.1 to 12.8 mg), nicotine (0.70 to 0.99 mg) and CO (6.9 to 13.8 mg) deliveries. A change in filter construction from carbon in a pocket to carbon in a plug-space-plug filter was noted. An increase in carbon content (7 to 64 mg) and a more porous cigarette paper (12 to 7 sec.) were noted. Expanded tobacco decreased (26 to 15%) and reconstituted tobacco increased (10 to 16%). This resulted in an increase in tobacco weight (0.589 to 0.640 g). The packaging was changed from white to red. These cigarettes are now similar to Lark 85. 8/81

LARK LIGHTS 100

Test marketed - 100 mm cigarette delivering 7 mg tar and 0.6 mg nicotine - 25 mm CA filter containing charcoal granules with 40% ventilation. Blend contains 19% Freon expanded tobacco. 11/78

The elimination of filter ventilation resulted in an increase in tar (7.2 to 13.1 mg), nicotine (0.65 to 1.08 mg) and CO (6.9 to 13.1 mg) deliveries. A change in filter construction from carbon in a pocket to carbon in a plug-space-plug filter was noted. An increase in carbon content (6 to 65 mg) and a more porous cigarette paper (12 to 6 sec.) were noted. Expanded tobacco decreased (26 to 15%) and reconstituted tobacco increased (10 to 16%). This resulted in an increase in tobacco weight (0.717 to 0.802 g). The packaging was changed from white to red. These cigarettes are now similar to Lark 100. 8/81

Tobacco weight (0.794 to 0.762 g) decreased - increased filter length (25 to 30 mm). 7/82

MASTERPIECE 85

Introduced - King size in soft pack with "pipe tobacco blend" - High TPM and nicotine. 6/65

OASIS 85

Dropped from C.I. History of Brand in C.I. 12/65. 1/66

C. LIGGETT GROUP (continued)OMNI LUXURY LIGHTS MENTHOL 100

Introduced - test market - Tar (9.2 mg) and nicotine (0.74 mg). The ventilation system consists of one row of laser perforation.

7/81

ST. MORITZ 100

Plain - Test marketed - Previously marketed by Larus & Bro. Blend contains both expanded tobacco and stems. Tar delivery is 18 mg.

7/74

Tar decreased from 19 to 16 mg.

8/76

Filter length increased 25 to 27 mm.

7/77

Tar decreased 16 to 13 mg; change to a more porous, mechanically perforated cigarette paper.

7/78

ST. MORITZ MENTHOL 100

Menthol - Test marketed - Previously marketed by Larus & Bro. Blend contains both expanded tobacco and stems. Tar delivery is 18 mg.

7/74

Lower tar (17 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from an increase in filter length (25 to 27 mm) and a change to a more porous cigarette paper (22 to 13 seconds).

2/78

Replaced inherently porous cigarette paper with mechanically perforated paper. Decrease in tar (14.4 to 13.7 mg).

7/78

VELLO 85

Plain - Test marketed 21 mm CA filter with a single row of ventilation holes having a center core of 8.0 Y-shape fibers and an outer periphery of 3.0 I-shape fibers - Filter system developed by Dr. Vello Norman - Tar (12 mg) and nicotine (0.8 mg) deliveries.

10/75

Cigarette re-engineered - Lower tar and nicotine as a result of a change in filter construction and blend formulation.

11/76

VELLO MENTHOL 85

Menthol - Test marketed 21 mm CA filter with single row of ventilation holes having a center core of 8.0 Y-shape fibers and an outer periphery of 3.0 I-shape fibers - Filter system developed by Dr. Vello Norman - Tar (12 mg) and nicotine (0.8 mg) deliveries.

10/75

Cigarette re-engineered - Changes in filter construction and blend formulation same as for Vello 85 cigarettes.

11/76

2050082060

D. LORILLARD COMPANYASPEN MENTHOL 85

Test marketed - Low tar (9 mg) and nicotine (0.8 mg) with a 25 mm CA filter containing 33% ventilation. High level of citrate in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap.

7/79

ASPEN MENTHOL 100

Test marketed - Low tar (9 mg) and nicotine (0.8 mg) with a 27 mm CA filter containing 40% ventilation. High level of citrate in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap.

7/79

BEECH-NUT 85 (NF)

Introduced - nonfilter, king size similar to Old Gold Straights.

7/61

BISTRO 85

Introduced - test market - Delivers 11 mg tar and 1.02 mg nicotine. The filter system uses micro-mechanical perforation.

9/81

BISTRO MENTHOL 85

Introduced - test market - Delivers 11 mg of tar, 1.01 mg of nicotine, and 0.35 mg menthol. The filter system uses micro-mechanical perforation.

9/81

CENTURY GREAT LENGTHS 100

100 mm cigarette with 20 mm CA filter. Name and warning label printed on cellophane - no identification on package.

9/67

Tar (2 mg) reduced by increase in tipping paper (24 to 30 mm).

2/68

Tar (1 mg) and nicotine (0.1 mg) decreased - change in filter - a new 25 mm dual filter with carbon noted.

3/69

DANVILLE 85

Introduced - king size filter cigarette.

4/66

DANVILLE MENTHOL 85

Introduced - mentholated cigarette with 20 mm CA filter.

8/66

2050082061

D. LORILLARD COMPANY (continued)DUNCAN 85 (NF)

Introduced - king size nonfilter - filler has a larger cut than normal domestic cigarettes. 9/65

Plastic mouthpiece added to cigarette - no filtration from mouthpiece. 11/65

HELMAR 80

80 mm cigarette - 17 mm CA filter - contains no RKS or reconstituted material. 4/67

HERITAGE 85

Introduced - test market - Delivers 10.9 mg tar and 0.93 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Bistro 85, Rebel 85, and Maverick 85. 11/81

HERITAGE 100

Introduced - test market - Delivers 11.6 mg tar and 1.01 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Rebel 100 and Maverick 100. 11/81

KENT 80

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight and rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted. 12/72

Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. No change in smoke deliveries noted. 4/77

Decrease in tar delivery (15 to 13 mg) resulting from introduction of filter ventilation (17%). The new diluted filter is referred to on the pack as the Micronite II filter. 6/78

KENT 85

Reconstituted tobacco first observed - Lighter filter with same efficiency. 5/61

Less porous paper with no effect on TPM or nicotine deliveries. 11/61

Alkaloids reduced by 0.1%. 10/63

Fiber shape changed cloverleaf to I. 4/64

Filter length increased 17 to 20 mm. 8/64

D. LORILLARD COMPANY (continued)KENT 85 (cont.)

Alkaloids and nicotine delivery increased slightly.	7/65
Alkaloids and nicotine delivery increased.	9/65
TPM increased 1 mg.	4/66
TPM decreased 1 mg by an increase in paper porosity.	6/67
Tipping paper increased 24 to 25 mm.	3/69
Reconstituted tobacco content increased (8 to 12%).	4/69
RKS decreased (8 to 4%).	10/69
Reconstituted tobacco increased 10 to 17%.	10/70
Reconstituted tobacco increased (16 to 18%); RKS decreased (6 to 2%).	9/71
RKS decreased 2 to 0%.	10/71
Alkaloids and reducing sugars increased - Nicotine delivery increased (0.1 mg).	5/72
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.	12/72
Filter length increased (20 to 21 mm). Lower tobacco weight and rod density noted.	7/76
Lower tar (17 to 13 mg) and nicotine (1.1 to 1.0 mg) resulted from the introduction of filter ventilation (27%). New ventilated filter is referred to on pack as the Micronite II filter.	6/77
Decrease in tar delivery (13 to 12 mg) resulting from an increase in filter ventilation.	11/78

KENT MENTHOL 85

Test marketed - Different from Kent 85 plain in many characteristics.	5/71
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KENT 100

Introduced - 100 mm cigarette with 20 mm CA filter.	4/67
Tar (1 mg) reduced by increasing tipping paper (24 to 27 mm).	11/67

2050082063

D. LORILLARD COMPANY (continued)KENT 100 (cont.)

Tar (2 mg) and nicotine (0.1 mg) reduced by increasing tipping paper (27 to 30 mm).	1/68
Tar (1 mg) and nicotine (0.1 mg) reduced by a change to a more porous paper.	5/68
RKS decreased (8 to 4%).	10/69
Reconstituted tobacco increased 10 to 17%.	10/70
Fiber shape changed from X-shape to Y-shape - Filter weight decreased - Tar increased (1 mg).	9/71
Reconstituted tobacco increased 16 to 18% - RKS decreased 6 to 2%.	9/71
RKS decreased 2 to 0%.	10/71
Alkaloids and reducing sugars increased - Nicotine delivery increased (0.1 mg).	5/72
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, puff count, and higher total. RTD - Also, lower tar and nicotine deliveries noted.	12/72
Tipping paper length increased 30 to 32 mm - tar (1 mg) and nicotine (0.1 mg) decreased.	11/74
Cigarette length (99.2 to 98.3 mm) decreased. Tobacco weight (0.87 to 0.84 g) decreased.	5/75
Filter length (25 to 27 mm) increased. No change in smoke deliveries.	6/75
Cigarette length increased (98.9 to 99.3 mm).	8/76
Lower tar (19 to 15 mg) and nicotine (1.3 to 1.1 mg) resulted from a change to a more efficient filter (42-52%) and more porous cigarette paper. Higher total and filter RTD's noted.	6/77
Lower tar delivery (15 to 13 mg) resulting from introduction of filter ventilation (30%). Change to a less efficient filter was also noted. The new ventilated filter is referred as the Micronite II filter.	7/77
Decrease in filter ventilation and change to a less porous cigarette paper resulted in an increase in tar delivery (13.6 to 14.5 mg).	12/77

2050082064

D. LORILLARD COMPANY (continued)KENT 100 (continued)

Decrease in tar delivery (14 to 13 mg) resulted from an increase in filter ventilation. Decrease in total RTD was noted. 8/78

KENT MENTHOL 100

100 mm mentholated cigarette similar to Kent 100. 6/70

Filter fiber shape changed from X-shape to Y-shape - Filter weight decreased. 8/71

Reconstituted tobacco increased 16 to 18% - RKS decreased 6 to 2%. 9/71

RKS decreased 2 to 0%. 10/71

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and puff count. Also, lower tar and nicotine deliveries noted. 12/72

Tipping paper length increased (30 to 32 mm) - Lower tar (1 mg) and nicotine (0.1 mg). 1/75

Cigarette length (99.1 to 98.3 mm) decreased. Tobacco weight (0.84 to 0.82 g) decreased. 5/75

Filter length increased from 25 to 27 mm. 5/76

Cigarette length increased (98.3 to 99.2 mm) 8/76

Introduction of filter ventilation at the 25% level resulted in lower tar delivery (17 to 15 mg). 8/78

KENT III 85

Test marketed - 85 mm cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Freon expanded tobacco. 25 mm dual CA filter with 63% ventilation. 11/78

Tar (3 to 2 mg) data changed on pack to comply with FTC Report. 4/82

Tar and nicotine deliveries removed from the pack. 7/83

D. LORILLARD COMPANY (continued)KENT III 100

Brand extension of Kent III 85. Tar (5 mg) and nicotine (0.5 mg) deliveries. Brand characterized by a high alkaloid blend containing 19% expanded tobacco and a dual 27 mm CA filter with 51% ventilation. Ventilation achieved by 6 rows of mechanically perforated holes. 10/79

Tar (5 to 4 mg) and nicotine (0.6 to 0.5 mg) data changed on pack to comply with FTC Report. 4/82

Tar and nicotine deliveries removed from the pack. 7/83

KENT GOLDEN LIGHTS 85

Plain - Introduced porous tipping paper with perforated plug wrap - Longest tipping paper (32 mm) of any 85 mm cigarette - Tar (9 mg) and nicotine (0.8 mg) deliveries. 11/75

Tar (9 to 8 mg) and nicotine (0.8 to 0.7 mg) deliveries decreased by increasing filter ventilation and paper porosity. Filler alkaloids content decreased. 3/76

Cigarette length increased (84.2 to 84.8 mm). Decrease in rod density and total RTD. 12/76

Cigarette length decreased (84.7 to 84.1 mm); lower tobacco weight also noted. 7/78

Lorillard changed the name of Kent Golden Lights 85 to Golden Lights 85. The product is the same; only the name has changed. 10/78

Tar (8 to 7 mg) and nicotine (0.8 to 0.7 mg) values changed on pack to comply with FTC Report. 5/82

Name changed back to Kent Golden Lights 85. 6/83

KENT GOLDEN LIGHTS MENTHOL 85

Test marketed - similar to Golden Lights 85 - Tar (8 mg) and nicotine (0.7 mg) deliveries. 6/76

Lower tar delivery (8.7 to 7.4 mg) resulting from an increase in filter ventilation. 11/77

Lorillard changed the name of Kent Golden Lights Menthol 85 to Golden Lights Menthol 85. The product is the same; only the name has changed. 10/78

Name changed back to Kent Golden Lights Menthol 85. 6/83

Tar (8 to 9 mg) and CO (8 to 9 mg) deliveries increased due to higher level of paper component (1.3 to 2.1%) - higher filler menthol (1.6 to 2.0 mg) correlated with higher smoke menthol (0.28 to 0.36 mg). 3/84

2050082066

D. LORILLARD COMPANY (continued)KENT GOLDEN LIGHTS 100

Introduced - low tar (9 mg) and nicotine (0.8 mg) with 27 mm CA filter containing ventilation (40%). High level of paper component in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap. Tar (10 mg) and nicotine (0.9 mg) listed on pack. 5/77

Lorillard changed the name of Kent Golden Lights 100 to Golden Lights 100. The product is the same; only the name has changed. 10/78

Nicotine value (0.7 to 0.8 mg) changed on pack to comply with FTC Report. 5/82

Name changed back to Kent Golden Lights 100. 6/83

KENT GOLDEN LIGHTS MENTHOL 100

Introduced - Similar to the Golden Lights 100 cigarettes. 5/77

Lorillard changed the name of Kent Golden Lights Menthol 100 to Golden Lights Menthol 100. The product is the same; only the name has changed. 10/78

Tar data changed on pack (8 to 7 mg) to comply with FTC Report. 6/82

Name changed back to Kent Golden Lights Menthol 100. 6/83

L.T. BROWN 120

Plain - Introduced 120 mm cigarettes - 30 mm CA filter. Tar (20 mg) and nicotine (1.5 mg) deliveries. Dark brown cigarette paper with pin-stripe lines. 6/75

L.T. BROWN MENTHOL 120

Menthol - Introduced 120 mm cigarettes - 30 mm CA filter. Tar (20 mg) and nicotine (1.5 mg) deliveries. Dark brown cigarette paper with pin-stripe lines. 6/75

LUKE 85

Test marketed - new 85 mm "full flavor" cigarette - Blend contains expanded tobacco (7%). 1/74

2050082067

D. LORILLARD COMPANY (continued)MAVERICK 85

Test marketed - High alkaloid blend (2.0%) and nicotine delivery (1.6 mg) for Lorillard product - 20 mm CA filter. 11/71

Alkaloids decreased - Sugars increased - Tar (2 mg) and nicotine (0.1 mg) reduced - Filler rod TPM reduced (3 mg). 5/72

Test marketed in Washington State - 85 mm - tar (10.3 mg) and nicotine (0.86 mg) - filter ventilation by band of MP holes. 5/81

MAVERICK 100

Test marketed in Washington State - 100 mm, tar (10.6 mg) and nicotine (0.91 mg) - filter ventilation by band of MP holes. 5/81

MAX SLIM LIGHTS 100 (BOX)

Introduced - Tar (10 mg) and nicotine (0.9 mg) - Two rows mechanical perforation (32% ventilation) - similar to Virginia Slims Lights 100. 2/82

MAX SLIM LIGHTS MENTHOL 100 (BOX)

Introduced - Tar (10 mg), nicotine (0.9 mg), and menthol (0.39 mg) - Two rows of mechanical perforation (32% ventilation) similar to Virginia Slims Lights Menthol 100. 2/82

MAX 120

Plain - Introduced 120 mm cigarette with 30 mm CA filter - White cigarette paper - Tar (16 mg) and nicotine (1.2 mg) deliveries. 7/75

MAX MENTHOL 120

Menthol - Introduced 120 mm cigarette with 30 mm CA filter - White cigarette paper - Tar (16 mg) and nicotine (1.2 mg) deliveries. 7/75

NEWPORT 80 (BOX)

Filter length (17 to 20 mm) and tipping paper length (22 to 24 mm) increased. Tar (18 to 16 mg) and nicotine (1.2 to 1.1 mg) deliveries decreased. 2/75

NEWPORT 80 (NON-MENTHOL-BOX)

Test marketed in Penn. - 80 mm, non-mentholated, tar (11.8 mg) and nicotine (1.04 mg) - filter ventilation by band of MP holes. 4/81

2050082068

D. LORILLARD COMPANY (continued)NEWPORT 85

Less porous paper with no effect on TPM or nicotine delivery.	12/61
Alkaloids decreased by 0.2%.	6/63
Increases observed in TPM and nicotine deliveries - Blend change indicated by increases in total alkaloids.	12/63
Nicotine delivery and filler alkaloids increased.	4/65
TPM and nicotine increased - less efficient filter - change in filter fiber denier.	1/66
Alkaloids and nicotine delivery decreased.	7/66
Filter length increased (17 to 20 mm).	1/67
RKS content increased 8 to 12%.	4/67
Tar (1 mg) and nicotine (0.1 mg) lower, no other changes noted.	7/68
Reconstituted material increased, 8 to 13%.	9/68
Package design change.	10/68
Color of tipping paper changed from white to cork.	11/68
Tar (2 mg), nicotine (0.1 mg), and menthol delivery (0.15 mg) decreased, amount of paper component increased, faster static burning time, filler menthol lower.	8/69
Blend change, higher alkaloids and lower sugars - more porous cigarette paper. No change in smoke deliveries.	11/69
Reconstituted tobacco increased 11 to 16% - RKS decreased 9 to 4%.	10/70
Reconstituted tobacco increased 16 to 18% - RKS decreased 6 to 0%.	9/71
Fiber shape changed X to Y.	11/71
Tar delivery (1.5 mg) and filler rod TPM (2 mg) decreased - Alkaloids increased.	5/72
Tar (1 mg) and nicotine (0.2 mg) increased - Changes noted in total alkaloids and paper porosity. Fiber shape and denier change correlating with a more efficient filter.	8/72
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.	12/72

2050082069

D. LORILLARD COMPANY (continued)NEWPORT 85 (continued)

Tar (2 mg) and nicotine (0.1 mg) deliveries were higher -
Increase in filler rod TPM and filler alkaloids content. 5/76

Filter length (20 to 21 mm) and tipping paper length
(24 to 25 mm) increased. 12/76

NEWPORT 85 (NON-MENTHOL-BOX)

Test marketed in Penn. - 85 mm, non-mentholated, tar
(13 mg) and nicotine (1.08 mg) - filter ventilation by
band of MP holes. 4/81

NEWPORT 100

Introduced - 100 mm mentholated cigarette with 20 mm CA
filter. 6/67

Tar (3 mg) and nicotine (0.2 mg) reduced by increase in
tipping paper length (24 to 30 mm). 7/68

Filter length increased 20 to 25 mm, no change in smoke
deliveries. 9/68

Tar (3 mg) increased - Filter length (20 to 25 mm) and
fiber denier change - Also, tipping paper changed from
white to cork. 11/68

Menthol in smoke and filler decreased. 9/69

Blend change, higher alkaloids and lower sugars - more
porous cigarette paper - No change in smoke deliveries. 11/69

Reconstituted tobacco increased 11 to 16%. 10/70

RKS decreased 7 to 3%. 9/71

RKS decreased 3 to 0%. 10/71

Tar (2 mg) and nicotine (0.3 mg) were increased by changes
in total alkaloids and paper porosity - Fiber shape and
denier changed. 8/72

Expanded tobacco added to blend (9%) - Resulted in lower
tobacco weight, rod density, puff count, and higher total
RTD - Also, lower tar and nicotine deliveries noted. 12/72

Blend change - Higher alkaloids and increased filler rod
TPM delivery resulting in higher tar (1 mg) and nicotine
(0.1 mg). 7/74

Tipping paper length (30 to 32 mm) increased. Tar (20 to
19 mg) and nicotine (1.4 to 1.3 mg) deliveries decreased. 2/75

2050082070

D. LORILLARD COMPANY (continued)NEWPORT 100 (continued)

Cigarette length (99.2 to 98.3 mm) decreased. Lower tobacco weight noted. No change in smoke deliveries. 4/75

Increase in tar (1 mg) and nicotine (0.1 mg) resulting from a change to a less porous paper - Filter length increased from 25 to 27 mm. 11/75

Tar (2 mg) and nicotine (0.1 mg) deliveries were higher - Increase in filler rod TPM and filler alkaloids content. 5/76

Cigarette length increased (98.2 to 99.3 mm). 12/76

NEWPORT 100 (BOX)

Test marketed in Connecticut - tar 20 mg, nicotine 1.6 mg. 6/84

NEWPORT LIGHTS 80 (BOX)

Test marketed - Tar (8 mg) and nicotine (0.7 mg) - Low delivery result of 33% filter ventilation with porous tipping paper. Similar to physical characteristics and blend composition of Newport Lights 85. 3/80

NEWPORT LIGHTS 85

Test marketed - low tar (10 mg) and nicotine (0.8 mg). Characterized by a 25 mm CA filter with ventilation (27%) and a high level of paper component in a fast burning cigarette paper. Ventilation system utilizes porous tipping paper. 5/77

NEWPORT LIGHTS 100

Introduced - nationally - Delivers 9 mg tar, 0.78 mg nicotine, and 0.36 mg of menthol. The low delivery is achieved by using porous tipping paper. 9/81

NEWPORT LIGHTS 100 (BOX)

Test marketed in Connecticut - tar 9 mg, nicotine 0.8 mg. 6/84

OLD GOLD 80 (BOX)

Introduced in flip-top box - Similar to Old Gold 85. 5/74

OLD GOLD 100

Introduced - 100 mm cigarette with 25 mm CA filter. 5/69

Coupon added to pack. 6/69

Reconstituted tobacco increased 10 to 16% - RKS decreased 9 to 4%. 10/70

Filter length (25 to 27 mm) increased - Tipping paper length (30 to 32 mm) increased. Tar (21 to 20 mg) and nicotine (1.4 to 1.3 mg) deliveries decreased. 2/75

2050082071

D. LORILLARD COMPANY (continued)OLD GOLD FILTER 85

Alkaloids reduced by 0.2%, nicotine delivery decreased. 1/63

Nicotine delivery and filler alkaloids increased - TPM increased slightly. 4/65

Filter length (17 to 20 mm) and fiber denier increased - tobacco weight decreased. 5/65

Coupon added to pack. 1/66

TPM (2 mg) and nicotine (0.1 mg) deliveries increased. 7/66

Reconstituted tobacco content increased (9 to 12%). 5/70

Reconstituted tobacco increased 10 to 16% - RKS decreased 8 to 5%. 10/70

Reconstituted tobacco increased 16 to 19% - RKS decreased 6 to 0%. 9/71

Filter fiber shape (I to Y) and denier (3.6 to 3.0) changed - No change in smoke deliveries. 10/71

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar, and nicotine deliveries were noted. 12/72

Tipping paper length increased 24 to 25 mm. 9/73

Filter length (20 to 21 mm) and tipping paper length (25 to 26 mm) increased. 11/74

Tar (1 mg) and nicotine (0.1 mg) increased as result of increase in filler rod TPM. 12/76

Lower tar (17 to 16 mg) and filler rod TPM deliveries observed resulting from a decrease in tobacco weight. 9/78

Coupon dropped from pack. 11/79

OLD GOLD LIGHTS 85

Introduced on test market - Low delivery (9 mg tar and 0.8 mg nicotine) cigarettes characterized by 25 mm CA filter with 34% ventilation. Ventilation achieved using porous tipping paper. Further characterized by a high level of paper component on cigarette paper. 8/77

OLD GOLD STRAIGHTS 85 (NF)

Long to king size. 5/60

2050082072

D. LORILLARD COMPANY (continued)REBEL 85

Introduced - test market - These cigarettes deliver 11.1 mg tar and 0.96 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Maverick 85. 10/81

Discontinued. 4/83

REBEL 100

Introduced - test market - These cigarettes deliver 10.9 mg tar and 0.99 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Maverick 100. 10/81

Discontinued. 4/83

REDFORD 85

Test marketed - new 85 mm "full flavor" cigarette - Similar to Old Gold 85. 4/73

SATIN 100

Test marketed - delivers 11 mg tar and 0.9 mg nicotine - two rows of mechanical perforation. 6/82

SATIN MENTHOL 100

Test marketed - delivers 11 mg tar, 0.9 mg nicotine and 0.39 mg menthol in smoke - two rows of mechanical perforation. 6/82

SPRING 85

Spring 85 replaced by Spring 100 in March, 1967 (History of Spring 85 in C.I. 1/72). 3/67

SPRING 100

Introduced - 100 mm mentholated cigarette with 20 mm CA filter. 3/67

Tar (1 mg) reduced by increasing tipping paper (24 to 27 mm). 11/67

Tar (2 mg) and nicotine (0.2 mg) reduced by increasing tipping paper (27 to 30 mm). 1/68

Filter length increased (20 to 25 mm) - Tar increased (2 mg). 1/69

Reconstituted tobacco increased 6 to 9% - RKS decreased 8 to 5%. 10/70

Reconstituted tobacco increased 11 to 18% - RKS decreased 8 to 0%. 9/71

Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and puff count - Also, lower tar and nicotine deliveries noted. 12/72

D. LORILLARD COMPANY (continued)SPRING 100 (continued)

Cigarette length (99.2 to 98.4 mm) decreased. Tar (20 to 19 mg) and nicotine (1.1 to 1.0 mg) decreased. 3/75

Tar (1 mg) decreased by a change in tipping paper length (30 to 32 mm). 11/75

Filter length (25 to 27 mm) and fiber denier (6.6 to 7.6 mm) increased - Filler alkaloids increased. 4/76

Cigarette length increased (98.7 to 99.3 mm). 12/76

TRIUMPH 85

Test marketed - 85 mm cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Freon expanded tobacco. 25 mm dual CA filter with 60% ventilation. 11/78

TRIUMPH MENTHOL 85

Test marketed - 85 mm menthol cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Freon expanded tobacco. 25 mm dual CA filter with 60% ventilation. 11/78

Tar (5 to 4 mg) and nicotine (0.6 to 0.5 mg) data changed on pack to comply with FTC Report. 5/82

TRIUMPH 100

Test marketed in New York - 100 mm, tar (4.7 mg) and nicotine (0.56 mg) - 6 rows of MP ventilation holes. 3/81

TRIUMPH MENTHOL 100

Test marketed in New York - 100 mm, tar (4.9 mg) and nicotine (0.58 mg) - 7 rows of MP ventilation holes. 3/81

TRUE 85

Introduced - king size filter cigarette with dual filter consisting of 10 mm CA and 10 mm polyethylene mouthpiece. 4/66

TPM decreased, 2 mg by increasing filter ventilation. 10/66

Tar decreased (1 mg) - A lower tobacco weight and filler rod TPM noted. 11/68

Reconstituted tobacco increased 10 to 14% - RKS decreased 8 to 3%. 10/70

Reconstituted tobacco increased 13 to 17% - RKS decreased 6 to 2%. 9/71

D. LORILLARD COMPANY (continued)TRUE 85 (continued)

RKS decreased 2 to 0%.	10/71
Fiber shape changed C to Y-shape - No change in deliveries.	11/72
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.	12/72
Filter length increased (20 to 25 mm) - Lower tobacco wt.	10/74
New 5 mg tar version introduced. Lower tar achieved by increased filter ventilation and lower tobacco weight. Expanded tobacco level increased (11 to 23%).	7/76
Cigarette length decreased 84.7 to 84.0 mm.	6/78
Tar (5 to 4 mg) data changed on pack to comply with FTC Report.	5/82
Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco.	11/83
Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco.	5/84

TRUE MENTHOL 85

Introduced - Similar to True filter except for presence of menthol.	9/66
Reconstituted tobacco increased 13 to 17% - RKS decreased 6 to 2%.	9/71
RKS decreased 2 to 0%.	10/71
Fiber shape changed C to Y-shape - No change in deliveries.	11/72
Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.	12/72
Filter length increased 20 to 25 mm - Lower tobacco weight.	1/75
New 5 mg tar version introduced. Cigarettes are similar to True 85.	7/76
Lower tar (6.5 to 5.0 mg) and nicotine (0.5 to 0.4 mg) observed correlating with an increase in filter ventilation. Increased filter ventilation resulted from decreasing the number of rows of ventilation holes (from 9 to 5) in the tipping paper and using a more porous combining plug wrap.	2/77
Cigarette length decreased 84.5 to 84.0 mm.	6/78
Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco.	11/83
Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco.	5/84

2050082075

D. LORILLARD COMPANY (continued)TRUE ULTRA ONE 85

Test marketed - ultra low tar (2 mg) and nicotine (0.2 mg) -
25 mm CA filter with 62% ventilation (6 rows of mechanically
perforated). 11/80

TRUE 100

Plain - test marketed - 12 mg tar and 0.8 mg nicotine -
Blend contains 13% expanded tobacco. 4/74

Cigarette length (99.5 to 97.9 mm) decreased. 6/75

Cigarette length (98.1 to 99.2 mm) increased - Lower
tobacco weight and rod density. 6/76

Filter length increased (25 to 27 mm). Tobacco weight
decreased. 7/76

Tar (13 to 8 mg) and nicotine (0.9 to 0.7 mg) decreased
resulting from an increase in filter ventilation and a lower
tobacco weight. A blend change indicated by a higher
filler alkaloid content, lower reducing sugars and a
higher expanded tobacco level (9 to 18%). 8/79

Test marketing re-engineered version in New Mexico - uses
laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered versions in national distribution - uses
laser perforation and lower level of expanded tobacco. 5/84

TRUE MENTHOL 100

Menthol - Test marketed - 12 mg tar and 0.8 mg nicotine -
Blend contains 13% expanded tobacco. 4/74

Cigarette length (99.4 to 98.3 mm) decreased. 6/75

Cigarette length (98.3 to 99.1 mm) increased - Lower
tobacco weight and rod density. 6/76

Filter length increased (25 to 27 mm). Tobacco weight
decreased. 7/76

Tar (13 to 9 mg) and nicotine (0.9 to 0.7 mg) decreased
resulting from an increase in filter ventilation and a lower
tobacco weight. A blend change indicated by a higher
filler alkaloid content, lower reducing sugars and a
higher expanded tobacco level (9 to 18%). 8/79

D. LORILLARD COMPANY (continued)TRUE MENTHOL 100 (cont.)

Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco. 11/83

Re-engineered version in national distribution - uses laser perforation and lower level of expanded tobacco. 5/84

YORK 88

Introduced - dual filter, carbon on tow filter - Filter has gas phase activity. 3/64

Introduced - dual filter, bonded carbon filter - Filter has gas phase activity. 4/64

YORK 90 (NF)

Introduced - Imperial Size (N-F, 90 mm). 8/61

Dropped from C.I. (History of Brand in C.I. 5/64). 3/64

YORK 100

Introduced - 100 mm cigarette with 20 mm CA filter. 3/67

ZACK 80

Introduced - package looks like blue denim - No unusual characteristics. 10/74

ZACK 85

Introduced - package looks like blue denim - No unusual characteristics. 10/74

2050082077

E. REYNOLDS TOBACCO COMPANYBRANDON 85 (NF)

Introduced - king size, nonfilter.

2/62

BRIGHT 85

Test market - Tar (6 mg), nicotine (0.5 mg) and menthol (0.5 mg) - one row mechanical perforation.

7/82

National distribution.

11/82

Filter length increased (25 to 27 mm) - tobacco weight decreased (0.638 to 0.610 g) - filter RTD increased (4.3 to 4.7 in.).

11/83

More porous cigarette paper (24 to 17 sec.) with increased paper component (0.4 to 0.8%) used on brand - Increased filler menthol (3.1 to 3.4 mg) resulted in higher smoke menthol (0.43 to 0.56 mg).

3/84

BRIGHT 100

Test market - Tar (6 mg), nicotine (0.5 mg) and menthol (0.5 mg) - one row mechanical perforation.

7/82

National distribution.

11/82

Increased level of paper component (0.4 to 1.4%) - higher filler menthol (4.1 to 4.5 mg) resulted in higher smoke menthol (0.49 to 0.56 mg).

3/84

BROOKWOOD MENTHOL 85

Test marketed - Tar (9 mg) - Cigarette has a high alkaloid blend with filter ventilation consisting of two rows of mechanically perforated holes. Very similar to the Real Menthol 85 already on the market.

8/79

CAMEL 70 (NF)

Nicotine delivery and filler alkaloids decreased.

2/62

Nicotine delivery and filler alkaloids increased. Also RTD decreased 0.3 inches of H₂O.

2/65

Expanded tobacco (7%) noted in blend of some cigarettes.

12/69

2050082078

E. REYNOLDS TOBACCO COMPANY (continued)CAMEL 70 (NF) (continued)

Expanded tobacco observed in all cigarettes - Tobacco weight lower - No change in tar or nicotine.	3/70
Filler alkaloids reduced (0.2%) correlating with a lower nicotine delivery.	11/75
Level of reconstituted tobacco increased from 9 to 16%.	9/78
Tar (24 to 19 mg), nicotine (1.7 to 1.4 mg), and CO (15 to 11 mg) deliveries were noted as a result in a change to a more porous cigarette paper and a change in the type paper component (phosphate to citrate).	11/80
CO delivery increased (12.6 to 15.8 mg) correlating with a change to less porous paper (17 to 25 sec.) - paper component increased (0.4 to 1.4%).	3/83

CAMEL FILTER 80 (BOX)

Plain - introduced in flip top box similar to Camel Filter 85 - Tar (19 mg) and nicotine (1.3 mg) deliveries.	10/75
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CAMEL FILTER 85

Introduced in three different packages - king size with a 20 mm CA filter.	10/65
Blend change noted in cigarette marketed in brown pack - lower alkaloids resulting in lower nicotine.	4/66
TPM (4 mg) and nicotine (0.2 mg) decreased as result of increase in filter efficiency.	3/67
TPM (2 mg) and nicotine (0.1 mg) decreased as result of change in blend.	4/67
Reconstituted material increased, 19 to 24%.	9/68
Expanded tobacco (9%) noted in blend - no change in tar or nicotine deliveries - Tobacco weight lower.	3/70
The amount of expanded tobacco increased (9 to 12%) - Nicotine delivery decreased (0.1 mg).	3/71
Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased. Lower tar (1 mg) and nicotine (0.1 mg) deliveries observed.	10/72

2050082079

E. REYNOLDS TOBACCO COMPANY (continued)CAMEL FILTER 85 (continued)

Filler alkaloids reduced (0.1%). 11/75

Tar (15.5 to 13.8 mg), nicotine (1.19 to 1.02 mg) and CO (17 to 14.4 mg) decreased - achieved filter ventilation (0 to 13%) by band of ESP holes. 4/81

Test marketed packs containing 12 cigarettes per pack. 3/83

CAMEL MENTHOL 85

Introduced - 85 mm mentholated cigarette with 20 mm CA filter. 9/66

TPM (4 mg) and nicotine (0.2 mg) decreased as result of a blend change. 9/67

CAMEL LIGHTS 80 (BOX)

Test marketed - Tar (8 mg) and nicotine (0.8 mg) - Similar in characteristics to Camel 85's. 4/80

CO (7.1 to 8.1 mg) increased - change to less porous cigarette paper (16 to 30 sec.) - paper component (0.9 to 1.4%) increased. 8/82

Tobacco weight (0.677 to 0.727 g) and rod density (0.250 to 0.264 g/cc) increased - decreased amount of expanded tobacco (18 to 11%) - decreased total alkaloids observed (1.99 to 1.59%). 9/82

Tar delivery increased (7.8 to 9.1 mg) due to decreased ventilation - Paper component decreased (1.4 to 0.9%). Paper porosity increased (29 to 16 sec.). 5/83

CAMEL LIGHTS 85

Introduced on test market - Low delivery cigarettes (10 mg tar and 0.8 mg nicotine) characterized by a 25 mm CA filter with 32% ventilation and a high alkaloid blend. 9/77

Tar (10 to 8 mg) and nicotine (0.9 to 0.8 mg) decreased from an increase in filter ventilation (25 to 35%). 4/80

Test marketed packs containing 12 cigarettes per pack. 3/83

Filter length increased (25 to 27 mm) - rod density increased (0.233 to 0.245 g/cc). 9/83

Less porous cigarette paper (16 to 24 sec.) with higher level of paper component (0.7 to 1.5%). 11/83

2050082080

E. REYNOLDS TOBACCO COMPANY (continued)CAMEL LIGHTS 100

Introduced - 12 mg tar and 1.2 mg nicotine - Very similar to Winston Lights 100's. 4/79

Tar (11.3 to 9.7 mg), nicotine (0.88 to 0.77 mg) and CO (14.5 to 13.6 mg) deliveries decreased - increased ventilation (20 to 26%) - increased filter length (27 to 31 mm) and weight (0.17 to 0.19 g) - decreased tobacco weight (0.851 to 0.808 g) - tipping paper length increased (34 to 35 mm). 5/84

CAMEL TALLS 100

Test marketed - similar to Winston 100 in most characteristics. 9/71

Removed from market. 4/72

CENTURY 85

National distribution in 33 states - 25 cigarettes per pack - 14 mg tar and 1 mg nicotine. 7/83

CENTURY LIGHTS 85

National distribution in 33 states - 25 cigarettes per pack - 9 mg tar and 0.8 mg nicotine. 7/83

CENTURY 100

National distribution in 33 states - 25 cigarettes per pack - 11 mg tar and 1 mg nicotine. 1/84

CENTURY LIGHTS 100

National distribution in 33 states - 25 cigarettes per pack - 11 mg tar and 1 mg nicotine. 1/84

DAWN 120

Introduced 120 mm cigarette - white cigarette paper with thin gray parallel lines (filigrain) - Tar (20 mg) and nicotine (1.5 mg) deliveries. 21 mm circumference. 5/75

DAWN MENTHOL 120

Introduced 120 mm menthol cigarette - white cigarette paper with thin gray parallel lines (filigrain) - tar (20 mg) and nicotine (1.5 mg) deliveries. 21 mm circumference. 5/75

DORAL 85

Plain (85 mm) model introduced - 25 mm filter, 10 mm CA, and 15 mm plastic sections and utilizes filter ventilation. 11/68

Expanded tobacco (6%) noted in blend since September, 1969. 11/69

E. REYNOLDS TOBACCO COMPANY (continued)DORAL 85 (continued)

Reconstituted tobacco in blend increased (20 to 23%) in Doral 85 Plain. Tar delivery increased (1 mg) - filter ventilation decreased (30 to 24%). 4/71

Tar delivery increased (1 mg) - Filter ventilation decreased (24 to 21%). 8/71

Tar delivery decreased by a change to a more porous cigarette paper and a lower filler alkaloid content - Tar (2 mg) and nicotine (0.1 mg) decreased. 9/75

Tar (1 mg) and nicotine (0.1 mg) increased as result of increase in filler rod TPM. 11/76

DORAL MENTHOL 85

Mentholated (85 mm) model introduced - 25 mm filter, 10 mm CA, and 15 mm plastic sections and utilizes filter ventilation. 11/68

A green plug wrap was placed between the plastic mouthpiece and outer plug wrap on Doral Menthol. 6/69

Expanded tobacco (6%) noted in blend since September, 1969. 11/69

The amount of expanded tobacco increased (6 to 8%) and the amount of filter ventilation increased. The tar decreased (1 mg). 2/71

Tar delivery increased (1 mg) - Filter ventilation decreased (30 to 24%). 4/71

Tar delivery increased (1 mg) - Filter ventilation decreased (24 to 21%). 8/71

Tar delivery decreased by a change to a more porous cigarette paper and a lower filler alkaloid content - Tar (2 mg) and nicotine (0.1 mg) decreased. 9/75

Higher tar (12.3 to 13.7 mg) and nicotine (0.9 to 1.0 mg) were noted corresponding to a decrease in filter ventilation. 3/77

DORAL II 85

Test marketed - These new Doral II cigarettes deliver 5 mg tar and 0.5 mg nicotine - 25 mm CA filter with 60% ventilation and a high level of paper component in the cigarette paper - 19% Freon expanded tobacco in the blend. 2/79

E. REYNOLDS TOBACCO COMPANY (continued)DORAL II MENTHOL 85

Test marketed - These new Doral II Menthol cigarettes deliver 5 mg tar and 0.5 mg nicotine - 25 mm CA filter with 60% ventilation and a high level of citrate in the cigarette paper - 19% Freon expanded tobacco in the blend. 2/79

Tar (5.3 to 3.8 mg), nicotine (0.48 to 0.41 mg) and CO (4.2 to 3.2 mg) lowered - increase in filter ventilation (53 to 65%) lower total RTD (3.6 to 2.8). 2/81

Paper component in cigarette paper decreased - higher puff count (7.2 to 7.5). 4/81

DORAL FILTER LIGHTS 85

Value entry product - test marketed in 13 states - delivers 12 mg tar - contains highest level of reconstituted material (32%). 5/84

DORAL FILTER LIGHTS MENTHOL 85

Value entry product - test marketed in 13 states - delivers 12 mg tar - contains highest level of reconstituted material (32%). 5/84

DORAL FILTER LIGHTS 100

Value entry product - test marketed in 13 states - first 100 mm cigarette introduced using Doral name. 5/84

DORAL FILTER LIGHTS MENTHOL 100

Value entry product - test marketed in 13 states - first 100 mm cigarette introduced using Doral name. 5/84

EMBRA 100

100 mm slim cigarettes with 27 mm filter, plain - new type pack and carton. 9/69

Expanded tobacco (6%) noted in blend since August, 1969. 11/69

Tar (4 mg) and nicotine (0.2 mg) increased by changes in paper porosity (11 to 18 sec.) and fiber denier. 2/70

Discontinued by Reynolds in May, 1970. 5/70

2050082083

E. REYNOLDS TOBACCO COMPANY (continued)EMBRA MENTHOL 100

100 mm slim cigarettes with 27 mm filter, mentholated -
new type pack and carton. 9/69

Expanded tobacco (6%) noted in blend since August, 1969. 11/69

Tar (4 mg) and nicotine (0.2 mg) increased by changes
in paper porosity (11 to 18 sec.) and fiber denier. 2/70

Discontinued by Reynolds in May, 1970. 5/70

JAMESTOWN 85

85 mm cigarette - similar to Winston 85 possibly for
trademark purposes. 6/70

MORE 120

Plain - Introduced - 120 mm cigarette with brown colored
cigarette and tipping paper. This new cigarette is slimmer
(21 mm circumference) and longer (119 mm) than any other
cigarette on the market. Two versions introduced - one
with 3 rows of parallel (mechanically) ventilation holes
the length of the cigarette rod and one without ventilation
holes. 9/74

Tar decrease (22 to 21 mg) by increase in filter ventilation
(22 to 36%). A lower total RTD was observed. 9/79

Tar (20.5 to 18.5 mg), nicotine (1.64 to 1.52 mg) and CO
(23.2 to 20.4 mg) reduced - lower filler rod TPM (38.1
to 35.1 mg). 1/81

Tar (17.3 to 15.8 mg), nicotine (1.46 to 1.23 mg) and CO
(20.4 to 19.3 mg) lowered - increase in filter length (30
to 35 mm) and tipping paper length (35 to 39 mm). 5/81

Tar (15 to 17.1 mg), nicotine (1.19 to 1.36 mg) and CO
(21 to 22.8 mg) increased - decreased ventilation (37
to 28%). 11/82

MORE MENTHOL 120

Menthol - Introduced - 120 mm cigarette with brown colored
cigarette and tipping paper. This new cigarette is slimmer
(21 mm circumference) and longer (119 mm) than any other
cigarette on the market. Two versions introduced - one
with 3 rows of parallel (mechanically) ventilation holes
the length of the cigarette rod and one without ventilation
holes. 9/74

2050082084

E. REYNOLDS TOBACCO COMPANY (continued)MORE MENTHOL 120 (continued)

Tar decrease (23 to 22 mg) by increase in filter ventilation (23 to 33%). A lower total RTD was observed. 9/79

Tar (21.2 to 18.8 mg), nicotine (1.75 to 1.53 mg) and CO (23.4 to 19.4 mg) reduced - lower filler rod TPM (38.1 to 35.1 mg). 1/81

Tar (18 to 16 mg), nicotine (1.5 to 1.3 mg) and CO (20 to 19 mg) lowered - increase filter length (30 to 35 mm) and tipping paper length (35 to 39 mm). 6/81

MORE LIGHTS 100

Introduced - a beige colored slim cigarette - targeted for the female market - tar (8 mg) and nicotine (0.6 mg) - expanded tobacco (16%). 6/81

MORE LIGHTS MENTHOL 100

Introduced - a beige colored slim cigarette - targeted for the female market - tar (8 mg) and nicotine (0.6 mg) - expanded tobacco (28%). 6/81

Filler menthol increased (2.6 to 3.4 mg) - smoke menthol increased (0.39 to 0.56 mg) - ventilation system changed from mechanical to Hauni laser perforation. 5/84

MR. MENTHOL 85

85 mm mentholated cigarette with 20 mm CA filter. Single row of ventilation holes - Blend does not contain expanded tobacco. 2/70

NOW 80 (BOX)

Introduced a low tar (0.2 mg) and nicotine (0.03 mg) cigarette. Ultra low delivery achieved by high filter ventilation (85%) and low tobacco weight (82% expanded tobacco). 4/80

NOW 85 (BOX)

Plain - test marketed in a flip-top box - Tar (2 mg) and nicotine (0.2 mg) deliveries - Accomplished primarily by high ventilation and blend composition - Blend contains 50% expanded tobacco and lowest filler weight of any 85 mm cigarette. 12/75

Test marketed in a crush-proof box - Tar (2 mg) and nicotine (0.2 mg) deliveries accomplished by high filter ventilation and blend composition - Blend contains 50% expanded tobacco and has a rod density of 0.17 g/cc. 1/76

E. REYNOLDS TOBACCO COMPANY (continued)NOW 85 (BOX) (continued)

Tar and nicotine data on pack changed to 1 mg and 0.1 mg, respectively. Lower tar achieved as result of increased filter ventilation. 12/76

Tar (1 mg) and nicotine (0.1 mg) data listed on pack replaced by statement "Ultra Low Tar." Increase in filler alkaloids noted. 11/77

Tar (2 to 0.6 mg), nicotine (0.2 to 0.06 mg) and CO (2 to <1.0 mg) lowered - increase filter ventilation (68 to 82%) and tipping paper (30 to 35 mm) - tar data on pack changed from 2 to 1 mg. 6/81

Filter length increased (25 to 27 mm) - filter RTD increased (6.1 to 6.5 in. H₂O) - tobacco weight (0.524 to 0.505 g) and rod density (0.182 to 0.718 decreased Ventilation system changed from mechanical perforation to laser perforation. 9/83

Tipping paper length decreased (35 to 31 mm). 1/84

NOW 85 (SOFT PACK)

Soft pack version marketed in Washington, D.C. Similar to hard box version of Now 85 cigarettes with the exception of a longer cigarette length. "Ultra Low Tar" specified on the package. 11/77

NOW MENTHOL 85 (BOX)

Menthol - test marketed in a flip top box - Tar (2 mg) and nicotine (0.2 mg) deliveries - Accomplished primarily by high ventilation and blend composition - Blend contains 50% expanded tobacco and lowest filler weight of any 85 mm cigarette. 12/75

Menthol - Test marketed in a crush-proof box - Tar (2 mg) and nicotine (0.2 mg) deliveries accomplished by a high filter ventilation and blend composition - Blend contains 50% expanded tobacco and has a rod density of 0.17 g/cc. 1/76

Tar and nicotine data on pack changed to 1 mg and 0.1 mg, respectively. Lower tar achieved as result of increased filter ventilation. 12/76

Tar (1 mg) and nicotine (0.1 mg) data listed on pack changed to 2 mg and 0.2 mg, respectively. Increase in filler alkaloids noted. 11/77

Tar (2 to 0.06 mg), nicotine (0.2 to 0.06 mg) and CO (2 to <1.0 mg) lowered - increase filter ventilation (68 to 82%) and tipping paper (30 to 35 mm) - tar data on pack changed from 2 to 1 mg. 6/81

2050082086

E. REYNOLDS TOBACCO COMPANY (continued)NOW MENTHOL 85 (BOX) (continued)

Filter length increased (25 to 27 mm) - decreased tobacco weight (0.517 to 0.492 g). Ventilation system changed from mechanical perforation to laser perforation. 11/83

Tipping paper length decreased (35 to 31 mm). 1/84

NOW MENTHOL 85 (SOFT PACK)

Soft pack version marketed in Washington, D.C. Similar to hard box version of Now Menthol 85 cigarettes with the exception of a longer cigarette length. "Ultra Low Tar" specified on the package. 11/77

NOW 100

Test marketed - Tar (2 mg) and nicotine (0.2 mg) - Low delivery achieved by 75% filter ventilation. 3/80

Expanded tobacco (25 to 50%) increased - reconstituted tobacco (22 to 15%) decreased - lower tobacco weight (0.805 to 0.664 g) and rod density (0.229 to 0.185 g/cc). 2/81

Ventilation system changed from three to two rows laser perforation. 5/83

Lower puff count due to less porous paper (14 to 23 sec.) with high level of paper component (0.5 to 1.6%). Increased filter RTD (3.7 to 4.7 in. H₂O) and filter efficiency (58 to 65%) due to change in fiber denier (3.5/Y to 2.6/Y). 11/83

Tar (2.8 to 3.6 mg), nicotine (0.28 to 0.34 mg) and CO (2.9 to 4.3 mg) increased - decrease in ventilation (74 to 66%) - filter length (27 to 31 mm), filter weight (0.18 to 0.20 g), increased - tobacco weight decreased (0.659 to 0.614 g). 5/84

NOW 100 (BOX)

Introduced - slim cigarette (22.5 mm), tar (0.00 mg), filter ventilation (95%), and filter RTD (9.5) - blend 100% expanded tobacco. 3/81

NOW MENTHOL 100

Test marketed - Tar (2 mg) and nicotine (0.2 mg) - Low delivery achieved by 75% filter ventilation. 3/80

Expanded tobacco (25 to 50%) increased - reconstituted tobacco (22 to 15%) decreased - lower tobacco weight (0.796 to 0.656 g) and rod density (0.229 to 0.185 g/cc). 2/81

2050082087

E. REYNOLDS TOBACCO COMPANY (continued)NOW MENTHOL 100 (continued)

Tar (2.8 to 1.4 mg) and nicotine (0.25 to 0.20 mg) decreased - ventilation (76 to 82%) increased - menthol (0.34 to 0.29 mg) decreased. 5/82

Tar (1.5 to 2.3 mg), nicotine (0.21 to 0.30 mg) and CO (0.9 to 1.8 mg) increased - decreased ventilation (82 to 76%). 9/82

Ventilation system changed from three to two rows laser perforation. 5/83

CO increased (1.6 to 2.5 mg) due to a change to a less porous paper (15 to 25 sec.) with higher level of paper component (0.4 to 1.9%) - Fiber denier decreased (3.2/Y to 2.4/Y) resulting in increased filter RTD (3.8 to 4.6 in. H₂O) and filter efficiency (54 to 64%). 1/84

Tar (2.5 to 3.4 mg) and CO (2.9 to 3.6 mg) deliveries increased - decreased ventilation (77 to 71%). Filter length increased (27 to 31 mm) - decreased tobacco weight (0.662 to 0.620 g), increased total RTD (3.4 to 4.1 in. H₂O) filter RTD (4.6 to 5.4 in. H₂O) and filter weight (0.19 to 0.21 g). 5/84

PRINCE ALBERT 85

Introduced - king size with a 20 mm CA filter - "pipe tobacco" blend. 8/65

REAL 85

Introduced - low tar (10 mg) and nicotine (0.8 mg) correlating with a 25 mm high efficiency CA filter with ventilation (27%). Blend contains similar levels of reconstituted material and Freon expanded tobacco typical of other Reynolds' products. Tar (9 mg) listed on pack along with a claim "Nothing Artificial Added." 6/77

Lower tar (10 to 8 mg) and nicotine (0.9 to 0.7 mg) resulting from an increase in filter ventilation (25 to 38%). 5/80

REAL MENTHOL 85

Introduced - low tar (10 mg) and nicotine (0.8 mg) correlating with a 25 mm high efficiency CA filter with ventilation (34%). Blend contains similar levels of reconstituted material and Freon expanded tobacco typical of other Reynolds' products. Tar (9 mg) listed on pack along with a claim "Nothing Artificial Added." 6/77

Filler and smoke menthol levels increased. 2/79

2050082088

E. REYNOLDS TOBACCO COMPANY (continued)SALEM 80 (BOX)

Introduced in flip-top box - Similar to Salem 85.	3/74
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Tipping paper length increased (23 to 24 mm). Decrease in tar delivery and puff count noted.	11/76
Decrease in tar (19 to 15 mg) and nicotine (1.2 to 1.1 mg) deliveries corresponding to the use of a more porous cigarette paper and a more efficient filter.	7/77

SALEM 85

Nicotine delivery and filler alkaloids decreased.	10/60
Nicotine delivery and filler alkaloids decreased.	7/63
Nicotine delivery and filler alkaloids increased.	7/64
Nicotine delivery and filler alkaloids increased.	2/65
TPM decreased 1.5 mg by changing paper additive.	3/65
Filter length increased, 17 to 20 mm.	10/66
Expanded tobacco (4%) noted in blend of some cigarettes.	11/69
Tar (1 mg) and tobacco weight decreased by addition of expanded tobacco.	3/70
Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased - No change in smoke deliveries.	2/73
Tar delivery (1 mg) decreased - Cigarette length decreased - puff count lower.	3/73
Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery.	11/75
Cigarette length (84.3 to 84.0 mm) decreased.	2/76
Decrease in tar (18 to 16 mg) and nicotine (1.2 to 1.0 mg) correlating with a change to a more porous cigarette paper.	5/77
Tar (13.7 to 15.2 mg), nicotine (1.04 to 1.19 mg) and CO (13.6 to 15.4 mg) increased - change to a less porous paper (18 to 20 sec.) and a less efficient filter (45 to 40%) - higher filler menthol (1.4 to 2.1 mg) resulted in higher menthol in smoke (0.42 to 0.55 mg). Tobacco wt. (0.783 to 0.745 g) and rod density (0.252 to 0.242 g/cc) decreased - increased paper component (0.6 to 1.3 %).	8/82

2050082089

E. REYNOLDS TOBACCO COMPANY (continued)SALEM 85 (continued)

Test marketed pack containing 12 cigarettes per pack. 3/83

Ventilation decreased (18% to none) resulting in higher tar (15 to 16 mg), nicotine (1.2 to 1.3 mg), CO (16 to 18 mg), and menthol (0.57 to 0.68 mg) deliveries. 5/83

Paper component level increased (0.6 to 1.5%). 11/83

SALEM EXTRA 85

Introduced - Delivers more menthol than current Salem 85 - cork tipping. 10/74

SALEM LIGHTS 85

Menthol - Test marketed - Tar (12 mg) and nicotine (0.8 mg) deliveries - Lower in tar than Salem 85 because of more porous cigarette paper, filter ventilation and an increased filter and tipping paper length. 11/75

Tar delivery (1 mg) decreased by increase in filter ventilation. 4/76

Tar (10 to 8 mg), nicotine (0.8 to 0.6 mg), and CO (13 to 12 mg) decreased resulting from an increase in both filter ventilation (16 to 28%) and tipping paper length (30 to 32 mm). 10/80

Tar (8.6 to 8.2 mg) and CO (10.7 to 8.8 mg) decreased - increased filter ventilation (30 to 42%). Paper porosity decreased (17 to 26 sec.) - paper component increased (0.7 to 1.6%). Tobacco weight (0.714 to 0.689 g) decreased - increased amount of expanded tob. (13 to 17%). 10/82

Test marketed pack containing 12 cigarettes per pack. 3/83

Tar (8 to 9 mg), nicotine (0.7 to 0.8 mg), CO (9 to 11 mg), and menthol (0.31 to 0.50 mg) deliveries increased due to decreased ventilation. Ventilation system changed from two to one row of mechanical perforation - decreased paper component - increased cigarette paper porosity. 5/83

Filter length increased (25 to 27 mm), rod density increased (0.237 to 0.244 g/cc). 9/83

Tar (9 to 10 mg), nicotine (0.77 to 0.82 mg) and puff count (7.4 to 7.8) increased - tipping paper length decreased (32 to 31 mm) - filler menthol (2.6 to 2.9 mg) and smoke menthol (0.48 to 0.52 mg) increased. 3/84

SALEM ULTRA 85

Name changed to Salem Ultra Lights. 3/82

2050082090

E. REYNOLDS TOBACCO COMPANY (continued)SALEM ULTRA LIGHTS 85 (continued)

Tar (4.8 to 5.5 mg), nicotine (0.42 to 0.47 mg) and CO (4.7 to 6.7 mg) increased - decreased ventilation (56 to 52%) and less porous paper (18 to 26 sec.) - increased paper component (0.8 to 1.7%). Filter efficiency (58 to 63%) increased - increased filter RTD (99 to 130 mm of H₂O) - Menthol in smoke (0.50 to 0.42 mg) decreased - lower menthol in filler and filter. 12/82

Filter (25 to 27 mm) and tipping paper (30 to 31 mm) lengths increased. Ventilation system changed from mechanical to Hauni laser. 11/83

SALEM 100

Test marketed - 100 mm long - 20 mm CA filter. 6/67

Tar (4 mg) and nicotine (0.2 mg) reduced by filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 12/67

Tar (2 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (6%) - Tobacco weight lower. 10/70

Reconstituted tobacco content of blend increased (22 to 26%). 4/71

Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased - No change in smoke deliveries. 1/73

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Name changed from Salem Premium Length 100 to Salem 100. 5/77

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Tar (15.3 to 13.9 mg) and CO (16.4 to 13.8 mg) decreased - increase in filter ventilation (17 to 28%). 1/81

Tar (14.6 to 17.0 mg), nicotine (1.17 to 1.27 mg) and CO (14.3 to 16.7 mg) increased - change to less porous paper (16 to 24 sec.) and decreased ventilation (25 to 19%). Menthol in smoke (0.43 to 0.69 mg) increased - higher menthol levels in filler and filter. 10/82

Test marketed pack with 12 cigarettes per pack. 3/83

CO decreased (16 to 14 mg) - change to more porous paper (25 to 17 sec.) with lower level of paper component (1.5 to 0.7%). 5/84

2050082091

E. REYNOLDS TOBACCO COMPANY (continued)SALEM LIGHTS 100

Introduced - appears to be low delivery (11 mg tar and 0.8 mg nicotine) version of Salem 100 cigarettes. Low delivery achieved by filter ventilation. 10/76

Name changed from Salem Long Lights 100 to Salem Light 100. 5/77

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Tar (10.3 to 9.8 mg) reduced - lower filter ventilation (33 to 29%) - increase in tipping paper length (31 to 35 mm). 2/81

Filter length increased (27 to 31 mm) - tobacco weight decreased (0.852 to 0.811 g). 6/84

SALEM SLIM LIGHTS 100 (BOX)

Introduced - nationally - delivers 7.6 mg tar and 0.61 mg nicotine. The cigarette circumference is 22.7 mm. 12/81

Tar data changed on pack (9 to 8 mg) to comply with FTC Report. 6/82

SALEM ULTRA 100

Name change to Salem Ultra Lights 100. 3/82

SALEM ULTRA LIGHTS 100

Tar (4.6 to 6.0 mg), nicotine (0.46 to 0.54 mg) and CO (6.0 to 7.9 mg) increased - change to a less porous paper (17 to 24 sec.) - increased paper component (0.8 to 1.5%). Tobacco weight (0.829 to 0.840 g) and rod density (0.236 to 0.241 g/cc) increased - decreased amount of expanded tobacco (28 to 16%) - Menthol in smoke (0.37 to 0.47 mg) increased - total and filter RTD increased. 12/82

Tar (5.3 to 6.1 mg) and CO (6.2 to 7.2 mg) increased - decreased ventilation (60 to 56%). Increased filter length (27 to 31 mm) and filter weight (0.20 to 0.22 g) - decreased tobacco weight (0.831 to 0.789 g). Ventilation system changed from mechanical to Hauni laser. 5/84

STERLING SPECIAL BLEND 94 (BOX)

National distribution - delivers 12 mg tar and 0.9 mg nicotine - packed in black pack - 94 mm cigarette length. 1/84

STERLING SPECIAL BLEND MENTHOL 94 (BOX)

National distribution - delivers 12 mg tar and 0.9 mg nicotine - packed in black pack - 94 mm cigarette length. 1/84

2050082092

E. REYNOLDS TOBACCO COMPANY (continued)TEMPO 85

Test marketed - dual carbon filter king size soft pack - fused carbon inner plug - high gas phase activity.	4/64
Polyethylene pellets added to charcoal filter - decrease in gas phase activity - blend change indicated by an increase in filler alkaloids and decrease in reducing sugars.	1/65
Nicotine delivery and filler alkaloids increased.	4/65
Gas phase activity of filter decreased.	2/66
TPM (5 mg) and nicotine (0.5 mg) decreased as result of changes in blend, cigarette paper, and filter.	12/66
Reconstituted tobacco content increased (17 to 23%).	3/67
Tar (4 mg) and nicotine (0.2 mg) reduced by change in filter length (20 to 25 mm) and in tipping paper (24 to 30 mm).	5/68
Tar (2 mg) reduced as a result of introduction of Hauni-type ventilation (27%) - A higher gas phase smoke index and lower total and filter RTD were noted.	10/68
Tar (2 mg) and nicotine (0.1 mg) increased by reduction in the amount of filter ventilation.	7/69
Tar (1 mg) and nicotine (0.1 mg) reduced by an increase in filter ventilation - Reduction in total and filter RTD was noted.	7/70
Package overwrap changed from cellophane to polypropylene.	8/70
Expanded tobacco observed in blend (3%) - Paper porosity changed (12 to 8 seconds) - Tar increased (1 mg).	10/71
Expanded tobacco increased (4 to 8%). Lower tobacco weight and rod density noted - Cigarette paper porosity changed (17 to 12 seconds).	3/72
Tar (5 mg) and nicotine (0.3 mg) reduced by increased filter efficiency and filter ventilation - Fiber denier of outer filter changed from 3.2 to 1.9 - Expanded tobacco increased from 7 to 11%.	2/76

2050082093

E. REYNOLDS TOBACCO COMPANY (continued)VANTAGE 85

A new low tar (11 mg) and nicotine (0.9 mg) cigarette with a new 25 mm geometrically shaped cellulose acetate filter - High alkaloids content and blend contains 8% expanded tobacco - Tar (11 mg) and nicotine (0.9 mg) listed on pack. 7/70

Filter shape of cigarettes modified and is similar to that of Vantage 100. A 25% reduction in filter weight resulted from this change in filter shape. 3/79

Incorporation of filter ventilation (19%) resulted in lower tar (10 to 9 mg) and nicotine (0.9 to 0.8 mg) deliveries. 5/79

Tar (9 to 10 mg) increased resulting from the elimination of filter ventilation. Vantage 85 cigarettes manufactured during April, May and June, 1979, had filter ventilation. 8/79

Incorporation of filter ventilation (16%) resulted in lower tar (10 to 9 mg). 3/80

Test marketed pack containing 12 cigarettes per pack. 3/83

VANTAGE MENTHOL 85

Similar to the Vantage plain except for menthol. 4/71

Filter design changed to circular openings at each end and constricted in the middle. 10/73

Menthol in smoke delivery decreased resulting from lower filler menthol content. 7/74

Tar (9.8 to 8.6 mg), nicotine (0.77 to 0.69 mg) and CO (15.2 to 12.6 mg) lowered - introduction of filter ventilation (14%) with one row of MP holes. Tar data listed on pack changed (11 mg to 9 mg). 2/81

VANTAGE 100

Low tar (11 mg) and nicotine (0.8 mg) cigarette characterized by a high efficiency filter containing 18% ventilation. A modified version of the Filtrona filter used on Vantage 85 cigarettes. Tar (11 mg) and nicotine (0.9 mg) listed on pack. 1/77

Name changed from Vantage Long 100 to Vantage 100. 4/77

Cigarette length increased corresponding to 0.4 mm increase in filter. 11/77

2050082094

E. REYNOLDS TOBACCO COMPANY (continued)VANTAGE 100 (continued)

Tar (10.0 to 7.5 mg), nicotine (0.80 to 0.67 mg) and CO (15.1 to 11.9 mg) lowered - increase in filter ventilation (18 to 30%). Tar data listed on pack changed (12 to 9 mg). 2/81

Increase in tar (7.6 to 9.0 mg) and CO (11.7 to 13.0 mg) as result of a change in paper porosity (13 to 17 sec.). 8/81

Total and filter RTD increased and filter efficiency decreased due to change in fiber denier and shape (1.7/R to 2.6/Y). 5/83

VANTAGE MENTHOL 100

Introduced - Tar (10 mg) and nicotine (0.8 mg) - filter configuration different from Vantage 100 resulting in higher total and filter RTD. 10/82

VANTAGE ULTRA LIGHTS 85

Test marketed - New cigarette delivers 6 mg tar and 0.7 mg nicotine. 25 mm CA filter and 32% filter ventilation. This new Vantage Ultra Lights 85 cigarette has a higher filler alkaloid content than the regular Vantage 85 cigarettes. 6/79

Filter changed to CA - expanded tobacco (28 to 17%), tobacco weight (0.630 to 0.697 g), filter ventilation (35 to 55%), tar (6.3 to 5.1 mg) and CO (9.4 to 5.5 mg) decreased. 5/81

CO (5.0 to 6.8 mg) increased - change to less porous paper (16 to 26 sec.) - Increased paper component, puff count decreased. Tobacco weight (0.698 to 0.616 g) decreased - amount of expanded tobacco (17 to 20%) increased. 7/82

Filter length increased (25 to 26 mm). 10/82

Test marketed Filtrona-type filter. 5/83

Filter (26 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - Ventilation system changed from mechanical to Hauni laser perforation. 11/83

VANTAGE ULTRA LIGHTS MENTHOL 85

National distribution - tar (5 mg) - similar to Vantage Ultra Lights 85 already on the market. 7/82

Test marketed Filtrona-type filter. 5/83

Filter (25 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - ventilation system changed from mechanical to Hauni laser. 11/83

E. REYNOLDS TOBACCO COMPANY (continued)VANTAGE ULTRA LIGHTS 100

Introduced - Tar (5 mg) and nicotine (0.5 mg) - Low delivery achieved by a filter ventilation of 47% - Blend contains 19% expanded tobacco. 10/79

Paper component in the cigarette paper decreased - higher puff count (8.6 to 9.2). 4/81

Filter changed to CA - expanded tobacco (28 to 17%), tobacco weight (0.791 to 0.836 g), filter ventilation (45 to 58%) increase - tar (5.2 to 5.6 mg) and CO (7.9 to 5.8 mg). 5/81

Tobacco weight (0.847 to 0.751 g) decreased - increased amount of expanded tobacco (17 to 20%). Lower filler rod TPM (29.0 to 26.2 mg) and puff count (10.7 to 9.0 mg) observed. Cigarette length shortened (99.4 to 99.0 mm). 7/82

CO (5.6 to 6.3 mg) increased - change to a less porous paper (17 to 24 sec.) - Increased paper component (0.8 to 1.3%). 8/82

Test marketed Filtrona-type filter. 5/83

CO (6.4 to 5.6 mg) decreased - change to a more porous paper (24 to 16 sec.) with lower level of paper component (1.6 to 0.9%). 1/84

CO (5.7 to 7.2 mg) increased - change to a less porous paper (16 to 26 sec.) - Filter weight (0.20 to 0.22 g), filter length (27 to 31 mm) and tipping paper length (34 to 35 mm) increased - tobacco weight decreased (0.770 to 0.714 g). 5/84

VANTAGE ULTRA LIGHTS MENTHOL 100

National distribution - Tar (5 mg) similar to Vantage Ultra Lights 100 already on the market. 7/82

Test marketed Filtrona-type filter. 5/83

CO (6.9 to 6.0 mg) decreased due to more porous cigarette paper (24 to 16 sec.) with less paper component (1.5 to 0.8%). 11/83

WINCHESTER 85

Plain - Introduced - Tar (18 mg) and nicotine (1.3 mg) - No unusual characteristics. 10/74

WINCHESTER MENTHOL 85

Menthol - Introduced - Tar (18 mg) and nicotine (1.3 mg) - No unusual characteristics. 10/74

2050082096

E. REYNOLDS TOBACCO COMPANY (continued)WINSTON 80 (BOX)

Nicotine delivery and filler alkaloids decreased.	9/60
Nicotine delivery and total alkaloids decreased. Reducing sugars increased.	6/61
Lighter filter of same efficiency.	11/61
Alkaloids reduced by 0.2%.	12/62
Total alkaloids reduced.	5/63
Nicotine delivery and filler alkaloids increased.	2/65
Tar (2 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (8%) - Tobacco weight lower.	3/70
The amount of expanded tobacco increased (8 to 10%). A lower tobacco weight and rod density were observed.	2/71
Filter length (17 to 19 mm) and tipping paper length (21 to 23 mm) increased - Tar (1 mg) and nicotine (0.1 mg) decreased.	3/73
Lower filler alkaloids (0.1%).	11/75
Tipping paper length increased (23 to 24 mm). Decrease in tar delivery (19 to 18 mg).	10/76
Tar (18 to 16 mg) and nicotine (1.3 to 1.1 mg) decreased by a change to a more porous paper and a more efficient filter.	1/80

WINSTON 85

Nicotine delivery and filler alkaloids decreased.	9/60
Lighter filter of same efficiency.	11/61
TPM and nicotine reduction (1.5 mg and 0.2 mg) - Total alkaloids reduced.	4/63
Nicotine delivery and filler alkaloids increased.	2/65
Filter length increased, 17 to 20 mm - No change in smoke deliveries.	8/66
Expanded tobacco (6%) noted in blend of some cigarettes.	11/69

2050082097

E. REYNOLDS TOBACCO COMPANY (continued)WINSTON 85 (cont.)

Tar (1.5 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (7%). Tobacco weight lower. 3/70

The amount of expanded tobacco increased (7 to 10%). A lower tobacco weight was noted. 3/71

Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. These changes increased filter efficiency and tar delivery decreased 1 mg. 12/72

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Cigarette length (84.7 to 84.0 mm) decreased. 2/76

Tar (19 to 16 mg) and nicotine (1.4 to 1.0 mg) decreased as result of a change to a more porous paper and a more efficient filter. 2/80

Tar (14.8 to 14.0 mg) - filter ventilation by band of E.S.P. holes. 5/81

Test marketed pack containing 12 cigarettes per pack. 3/83

Tar (14.5 to 16.0 mg) and nicotine (1.1 to 1.2 mg) increased due to increased filler rod TPM (30.2 to 33.4), fiber denier (2.6/Y to 3.6/Y) and decreased paper component (1.6 to 0.4%). 7/83

WINSTON LIGHTS 85

Introduced - 14 mg tar and 1.1 mg nicotine - 25 mm filter and ventilated - Blend contains 14% expanded tobacco. 7/74

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Tar (12 to 10 mg), nicotine (0.9 to 0.8 mg), and CO (13 to 10 mg) deliveries were lowered as result of an increase in filter ventilation (16 to 25%). Filter ventilation increased by increasing number of ventilation holes from one row to two rows of mechanically perforated holes. 12/80

The tipping paper was changed from white to cork. The word "lights" on the tipping paper was removed and only the name Winston now appears on the cigarette. 12/81

Tar (9.4 to 8.4 mg) and CO (11.2 to 10.0 mg) decreased - increased ventilation (26 to 36%). Lower tobacco weight (0.736 to 0.715 g) and rod density (0.254 to 0.248 g/cc) observed. 9/82

2050082098

E. REYNOLDS TOBACCO COMPANY (continued)WINSTON LIGHTS 85 (cont.)

Filter length increased (25 to 26 mm). 10/82

Test marketed pack containing 12 cigarettes per pack. 3/83

Filter (26 to 27 mm) and tipping paper (30 to 31 mm) lengths increased - rod density increased (0.244 to 0.249 g/cc) - Ventilation system changed from one row laser to one row mechanical perforation. Total and filter RTD increased. 9/83

Tar (9 to 11 mg), nicotine (0.7 to 0.9 mg) and CO (9 to 11 mg) increased - decreased ventilation (32 to 24%). Less porous paper (17 to 24 sec.) - ventilation changed from mechanical to electrostatic perforation. 1/84

WINSTON ULTRA 85

Test marketed - ultra low tar (3 mg) with a 25 mm CA filter and 60% filter ventilation - blend contains 25% expanded tobacco 10/80

Tar (3.4 to 4.6 mg), nicotine (0.39 to 0.46 mg), and CO (4.0 to 5.5 mg) increased - lower filter ventilation (59 to 55%) - lower filter RTD (4.5 to 3.8), tobacco weight (0.645 to 0.609 mg) and rod density (0.222 to 0.209 g/cc) - increase in expanded tobacco (23 to 34%). 2/81

Name changed to Winston Ultra Lights 85. 12/81

WINSTON ULTRA LIGHTS 85

Name changed from Winston Ultra 85. The tipping paper was changed from white to cork. 12/81

Tar (4.9 to 5.4 mg) and CO (4.4 to 6.3 mg) increased. A higher total and filter RTD were observed. Ventilation system changed from 2 to 1 row of mechanical perforation, lower ventilation noted (51 to 44%). 5/82

Tobacco weight (0.594 to 0.638 g) and rod density (0.206 to 0.220 g/cc) increased - decreased amount of expanded tobacco (30 to 20%). 8/82

Filter length increased (25 to 26 mm) - CO delivery increased (6.0 to 7.6 mg) due to change to less porous paper (17 to 23 sec.) - paper component increased (0.8 to 1.6%). 3/83

Filter length (26 to 27 mm) increased rod density decreased (0.216 to 0.211 g/cc). 9/83

Tipping paper length decreased (32 to 31 mm). 1/84

2050082099

E. REYNOLDS TOBACCO COMPANY (continued)WINSTON 100

Test marketed - 100 mm long - 20 mm CA filter. 1/67

Tar (6 mg) and nicotine (0.3 mg) reduced by increase in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 12/67

Tar (1 mg) and nicotine (0.1 mg) increased by a blend change. 4/68

Expanded tobacco (6%) noted in blend of some cigarettes. 12/69

Tar (1 mg) and nicotine (0.1 mg) decreased by addition of expanded tobacco (7%) - Tobacco weight lower. 3/70

The amount of expanded tobacco increased (7 to 11%). A lower tobacco weight and rod density were noted. 3/71

Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased. Lower tar (1 mg) and nicotine (0.1 mg) observed. 9/73

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Cigarette length (99.4 to 99.0 mm) decreased. 2/76

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Pack color changed from gold to red. 1/82

Tar (14.1 to 16.4 mg), nicotine (1.02 to 1.25 mg) and CO (15.8 to 16.6 mg) increased - change to a less porous paper (17 to 25 sec.). Increased paper component (0.8 to 1.2%). 9/82

Test marketed pack containing 12 cigarettes per pack. 3/83

WINSTON LIGHT 100

Introduced - 14 mg tar and 1.1 mg nicotine - High efficiency 27 mm CA filter with 15% ventilation - cork tipping paper. 3/77

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Lower tar (13 to 12 mg) correlating with a more efficient filter. 5/79

Test marketed pack containing 12 cigarettes per pack. 3/83

Tar (12.1 to 11.1 mg) and nicotine (0.94 to 0.86 mg) decreased - increase in filter length (27 to 31 mm), filter weight (0.16 to 0.19 mg), and tipping paper length (34 to 35 mm). 5/84

E. REYNOLDS TOBACCO COMPANY (continued)WINSTON ULTRA 100

Test marketed - ultra low delivery (4 mg) - 28 mm CA filter with 52% filter ventilation - blend contains 25% expanded tobacco. 10/80

Name changed to Winston Ultra Lights 100. 12/81

WINSTON ULTRA LIGHTS 100

Name changed from Winston Ultra 100. The tipping paper was changed from white to cork. 12/81

Expanded tobacco amount decreased (29 to 21%) - increased filter weight (0.18 to 0.20 g) resulted in increased filter RTD (124 to 140 mm H₂O). 9/82

Filter length (27 to 31 mm), filter weight (0.20 to 0.22 g) and tipping paper length increased (34 to 35 mm) - tobacco weight decreased (0.770 to 0.723 g). 5/84

WINSTON MENTHOL 100

Test marketed - 100 mm long - 20 mm CA filter. 1/67

Tar (4 mg) and nicotine (0.2 mg) reduced by increase in filter length (20 to 25 mm) and tipping paper (24 to 30 mm). 12/67

Tar (2 mg) decreased by addition of expanded tobacco (6%) - Tobacco weight lower. 10/70

Filter length (25 to 27 mm) and tipping paper length (30 to 31 mm) increased - No change in smoke deliveries. 1/73

New silver package - High menthol in smoke, filler, and filter. 8/74

Lower filler alkaloids (0.1%) correlating with a lower nicotine delivery. 11/75

Cigarette length increased corresponding to 0.4 mm increase in filter length. 11/77

Lower tar (19 to 17 mg) and nicotine (1.4 to 1.3 mg) deliveries resulting from an increase in tipping paper length (31 to 34 mm). 4/79

Lower tar (18 to 15 mg), nicotine (1.4 to 1.3 mg) and menthol deliveries achieved by the introduction of filter ventilation (17%). 8/79

2050082101

F. GENERIC BRANDSBRONSON LIGHTS 100

Distributed by National Product Group - manufactured by
Liggett Group.

3/84

BRONSON ULTRA LIGHT 100

Distributed by National Product Group - manufactured by
Liggett Group.

3/84

COST CUTTER LIGHTS 85

Distributed by The Kroger Company - manufactured by
Liggett Group.

4/81

COST CUTTER LIGHTS 100

Distributed by The Kroger Company - manufactured by
Liggett Group.

6/82

COST CUTTER LIGHTS MENTHOL 85

Distributed by The Kroger Company - manufactured by
Liggett Group.

6/82

ECON MENTHOL 85

Distributed by Richfood, Inc. - manufactured by
U.S. Tobacco Company.

10/81

EPIC DELUXE LIGHTS 85

Distributed by Southland Corp. - manufactured by
Liggett Group.

11/83

EPIC DELUXE LIGHTS MENTHOL 85

Distributed by Southland Corp. - manufactured by
Liggett Group.

11/83

FILTER ULTRA LIGHTS 85

Distributed by Gary Tobacco Co. - manufactured by the
Liggett Group.

3/83

FILTER ULTRA LIGHTS 100

Distributed by Gary Tobacco Co. - manufactured by the
Liggett Group.

3/83

2050082102